

AUTHOR INDEX

VOLUME 18

- Abe, Shigeo, 977
Adair, Frank W., 299
Addison, Betty V., 204
Aden, David P., 961
Akers, T. G., 893
Alder, Ann O., 291
Alford, John A., 1060
Allnoch, Hedi, 869
Amici, A. M., 464
Anderson, A. W., 883, 906
Anderson, Roger L., 180
Anellis, Abe, 604
Arima, Kei, 660
Arseculeratne, S. N., 88
Asch, Bonnie B., 897
Attebery, H. R., 558
Ayres, John C., 714, 718, 938
- Baas, Ruth, 396
Baker, Carolyn N., 204
Baker, David A., 932
Baker, Julia, 618
Baldwin, Beverly B., 677
Baldwin, Jack N., 628
Bandunatha, C. H. S. R., 88
Bannister, Thomas, 303
Banwart, G. J., 542, 838
Barden, Louise, 646
Barnes, Richard, 861
Barros, Milton, 547
Barry, A. L., 156
Bartes, Sylvia F., 282
Bartha, Richard, 274
Bayne, H. G., 318
Beesley, Earl D., 834
Beisel, William R., 482
Bendinelli, M., 531
Berkowitz, D., 604
Berkowitz, J., 703
Bernsohn, K. L., 156
Beskid, G., 207
Bilimoria, M. H., 1025
Binnings, Gerald F., 861
Birnbaum, Jerome, 287
Bishop, W. W., 24, 636
Blazevic, Donna J., 535, 566
Bodey, G. P., 76
Bohrer, C. W., 1089
Bond, Walter W., 1002
Bordeleau, Lucien M., 274, 369
Bourke, J. B., 323
Boush, G. Mallory, 972
Boyle, Gerald L., 601
Brent, Robert L., 280
Brest Nielsen, B., 985
Broome, Clarisa, 940
Brown, William J., 496
Bucca, Matthew A., 291
- Buck, John D., 562
Bulich, Anthony A., 944
Bulla, L. A., 490
Bullerman, Lloyd B., 714, 718
Burmeister, H. R., 848
Burrous, S. E., 448
- Cabasso, V. J., 410
Caldwell, R. C., 1098
Calisher, Charles H., 433
Calloway, Doris Howes, 152
Carlisle, Harold N., 1077
Casida, L. E., Jr., 114, 340, 1065
Caskey, Patrick E., 124
Catalano, Louis W., Jr., 1094
Cawein, J. B., 448
Chalupa, W., 942
Chappell, W. Adrian, 433
Cheney, Roberta, 798
Cherry, William B., 1015
Chester, Leo, 433
Child, J. J., 515
Chirigos, M. A., 474
Chitwood, Lawrence A., 193
Ciegler, Alex, 64, 128
Clark, Carol W., 332
Clayton, Diane, 289
Cleeland, R., Jr., 207
Cline, J. C., 14
Coleman, R. Marie, 420, 427
Colwell, Rita R., 1044
Cook, Elton S., 641
Cook, Reginald O., 294
Coriell, Lewis L., 142
Cox, Marilyn F., 628
Cox, Patricia M., 485
Crampton, Veronica M., 771
Crawford, James J., 646
Crumrine, Martin H., 911
Cruz-Camarillo, Ramón, 689
- Danielsson, Dan G., 337
da Silva Teles, Edson, 547
Davé, Bhalchandra A., 771
Davis, Ausma, 618
Davis, N. D., 622
Davis, P. C., 410
Day, Fred E., 198
Deibel, R. H., 126, 174
DeLong, D. C., 14
Delorenzo, W. F., 207
Demain, Arnold L., 287
Dennis, Juanita, 500
Denny, C. B., 1089
de Silva, L. M., 88
Devine, L. F., 684
Dhavlilar, R. S., 1084
Dickerson, R. W., Jr., 889
- Dickson, M. H., 323
Diener, U. L., 622
Dietz, Alma, 694
Dixon, Glen J., 256
Dobosch, Dora, 511
Doggett, Robert G., 936
Dold, H. J., 221
Dubovi, E. J., 893
Duma, Richard J., 404
Durban, E., 44
- Ebert, Paul S., 474
Echelberger, Wayne F., Jr., 965
Eickhoff, Theodore C., 469
El-Bisi, H. M., 604
Eldering, Grace, 618
El-Din Sharabi, Nagim, 369
Ellner, Paul D., 766
el-Shazly, K., 313
Engelhard, Warren E., 376
Engler, Reto, 940
Etchells, J. L., 856
Ewert, D. L., 942
- Faber, John E., 262
Fantasia, Leonard D., 708
Faparusi, S. I., 122
Farmer, J. J., III, 760
Feary, Thomas W., 918
Fedorko, Joseph, 869
Felton, F. G., 214
Fields, Joseph E., 1007
Finegold, Sydney M., 458, 558
Finstein, M. S., 703
Fleming, H. P., 856
Foltz, Vernon D., 682, 911
Forget, A., 668
Fredette, V., 668
Fritsch, A. J., 684
Fuccillo, David A., 1094
Fulghum, Robert S., 677
Furness, Geoffrey, 360
Furuya, Akira, 977
- Gabridge, M. G., 697
Garibaldi, J. A., 318
Gaudy, A. F., Jr., 776, 785, 790
Gaudy, Elizabeth T., 776
Gause, E. M., 650
Gee, Pinkie S., 500
Geftic, Sam G., 299
Gelzer, Justus, 299
Georg, Lucille K., 420, 427
Gerber, Nancy N., 1
Gerencser, Mary A., 80
Gerzon, K., 14
Gifford, George E., 897
Gilardi, Gerald L., 355

- Giron, David J., 584
 Glasgow, Lowell A., 932
 Gledhill, William E., 114, 340
 Goepfert, J. M., 612
 Goldblith, S. A., 24, 636
 Gorman, Marvin, 310
 Gottlieb, David, 35
 Grady, C. P. L., Jr., 776, 785, 790
 Graves, R. R., 848
 Grecz, N., 44
 Greene, Arthur E., 142
 Greene, J. F., Jr., 533
 Greiff, Donald, 130
 Grinstein, Saul, 1007
 Grunberg, E., 207
 Grunnet, K., 985
 Guthmann, Walter S., 365
- Hall, Elmer C., 824
 Hall, Jack W., 198
 Halonen, Pekka E., 433
 Hamill, Robert L., 310
 Hamilton, P. B., 570, 946
 Hancock, G. A., 991
 Hargrove, R. E., 328
 Harris, E., 874
 Harrison, Janice M., 188
 Hartman, Paul A., 714, 718, 944
 Hartsell, S. E., 956
 Haskins, R. H., 515
 Hatch, Milford H., 98
 Hatten, Mary B., 680
 Hedberg, Mary, 854
 Heilman, W. R., 1089
 Heinemann, Bernard, 550
 Herman, Lloyd G., 760
 Hesseltine, C. W., 490, 579, 848
 Hicks, Ruthann, 612
 Hierholzer, John C., 816, 824
 Higgins, Thomas E., 771
 Hok, K. A., 410
 Holme, Tord, 235
 Holwerda, Jack, 618
 Horta-Barbosa, L., 251
 Hou, C. T., 272
 Houghtby, Gary A., 950
 Howard, Alma J., 550
 Hsu, Edward J., 958
 Hunt, D. E., 1098
- Ibrahim, Abdel Aziz E., 444, 748
 Ichimi, Tae, 1036
 Ijichi, K., 318
 Isenberg, Henry D., 387, 656
 Ishikawa, Ichijiro, 406
 Ito, Keith A., 166
- Jakubczyk, Tadeusz, 771
 Janssen, Robert J., 880
 Jarboe, C., 604
 Jennings, Myra B., 193
 Jensh, Ronald P., 280
 Joglekar, S. S., 1084
 Johanson, Waldemar G., 276
- Jonas, A. M., 1072
 Jones, M., 935
 Joshi, N. N., 935
- Kaji, Akira, 1036
 Kang, Chunghee K., 798
 Karlson, Alfred G., 124, 692
 Katz, Sol, 869
 Kaufman, Leo, 307
 Kaysner, Charles A., 950
 Kelley, Lee M., 880
 Kellogg, Douglas S., Jr., 21
 Kendrick, Jerry Z., 147
 Kenney, D., 159
 Kimble, C. E., 883
 King, A. Douglas, Jr., 166
 Kinoshita, Shukuo, 977
 Kirk, B. E., 496
 Kirkman, James B., Jr., 646
 Klein, George C., 204
 Kluses, Elmer S., 1096
 Knight, Nancy L., 1060
 Kominos, S., 656
 Kotzé, J. P., 744
 Kraft, D. J., 703
 Krasnow, I., 915
 Kreitzer, Madeleine J., 838
 Kubica, G. P., 399
 Kunz, Lawrence J., 526
- Lachica, R. Victor F., 126, 174
 Lee, Ching Ho, 1092
 Lee, J. S., 188
 Lee, Spencer H. S., 731
 Leiderman, Eduardo, 596
 Lennette, Edwin, 500
 Lester, Arzell, 21
 Levin, R. E., 528
 Levine, H. B., 522
 Lewis, Vester, 289
 Licciardello, J. J., 24, 636
 Lilliard, H. S., 938
 Lisiewski, Kathleen J., 954
 Liska, B. J., 104, 108
 Lisker, N., 517
 Litchfield, Carol D., 1044
 Loesche, Walter J., 723
 Logan, Leslie C., 485
 Long, James L., 843
 Lorrier, Johanna C., 57
 Louie, R. E., 410
 Lu, J. Y., 104, 108
 Lucas, G. B., 570
 Lyons, A. J., Jr., 579
- McColl, J. D., 935
 McCollough, M. L., 883
 McDade, Joseph E., 133
 McDonough, F. E., 328
 McGarrity, Gerard J., 142
 McInnis, D. J., 396
 McLaughlin, David, 307
 MacMillan, James D., 771
 Magne, Frank C., 1050
- Manahan, Stanley E., 479
 Mandle, Robert J., 142
 Mangine, Francis W., 365
 Mao, J. C. H., 159
 Marcoux, J. André, 699
 Marcus, Leon, 4
 Marietti, Maurice, 1077
 Marples, R. R., 228
 Marraro, Robert V., 575
 Marsden, L., 282
 Marsh, David H., 1096
 Marsik, Frederic J., 948
 Martin, John E., Jr., 21
 Martin, W. J., 282
 Martinez, Cara L., 245
 Mathews, John, 694
 Matsen, John M., 452, 566
 Matsui, Masanao, 660
 Matsumura, Fumio, 972
 May, K. R., 513
 Mayer, V. W., 697
 Mebus, Charles A., 961
 Meekins, William E., 1091
 Melnick, Joseph L., 1007
 Merdinger, Emanuel, 365
 Meyer, Melvin T., 925
 Meyer, T. S., 684
 Michener, H. David, 166
 Middaugh, P. R., 631
 Miller, John K., 854
 Miner, R. C., 410
 Minghetti, A., 464
 Misato, Tomomasa, 660
 Mishra, S. K., 686
 Mitraka, B. M., 1072
 Mittermeyer, Frank C., 682
 Miyazaki, Satoru, 972
 Mod, Robert R., 1050
 Moellering, Robert C., Jr., 526
 Mogabgab, William J., 596
 Monroe, P. W., 214
 Montgomery, M. W., 906
 Moore, C. E., 684
 Moody, Marcia R., 262
 Moody, Max D., 204
 Morimoto, Makoto, 660
 Mothershed, Susan M., 806
 Muchmore, H. G., 214
 Mukkada, Antony J., 641
 Myers, Donald M., 511
 Myers, Murrel L., 294
- Nakatani, Nobuji, 660
 Needham, Gerald M., 198
 Nelson, A. I., 68
 Nelson, Janet D., 14
 Nesbitt, L. R., 515
 Nickerson, J. T. R., 24, 636
 Nicolas, Gregorio, 35
 Nimmo, Lynn N., 535
 Norins, Leslie C., 485
 Norris, George F., 294
 Northrop, R. L., 221

- Novak, Arthur F., 1050
 Nutini, Leo G., 641
 O'Connor, P. E., 282
 Ogg, James E., 1096
 Olechowski-Gerhardt, Carolyn, 703
 Onishi, Hiroshi, 1031
 Orcutt, D. M., 245
 Ordal, Z. John, 68, 332, 958
 Orth, D. S., 906
 Oswald, E. J., 697
 Ottow, J. C. G., 41
 Oughton, Carl J., 1091
 Packer, R. A., 589
 Pagenkopf, Andrea, 798
 Paik, W. W., 901
 Palumbo, Samuel A., 137
 Paquette, G., 668
 Parisi, Joseph T., 948
 Parsons, James E., 376
 Paterno, V. A., 883
 Pattee, Harold E., 952
 Pavoni, Joseph L., 965
 Paynter, M. J. B., 942
 Pearson, John W., 474
 Pekarek, Robert S., 482
 Perlman, D., 272
 Person, Donald A., 95
 Petersen, Norman J., 1002
 Peterson, Mirdza L., 8
 Peterson, R. E., 64
 Phair, John P., 303
 Pierce, Alan K., 276
 Pindak, Frank F., 147
 Pirtle, J. K., 214
 Pittillo, Robert F., 284, 509, 519
 Pittman, Bertie, 1015
 Prasad, Chandan, 131
 Preonas, D. L., 68
 Prescott, J. M., 1044
 Pridham, T. G., 579
 Prince, W. R., 946
 Pringle, Thomas C., 861
 Quilligan, J. J., Jr., 533
 Rabey, Frank, 880
 Randhawa, H. S., 686
 Ray, Brenda J., 509
 Read, R. B., Jr., 889
 Reamer, R. H., 328
 Reddy, M. Srinivasulu, 755
 Reed, Norman D., 961
 Reinbold, G. W., 755
 Reiser, R. F., 1041
 Reising, Gilbert, 337
 Reitman, Morton, 278
 Rheins, Melvin S., 575
 Rhoden, D. L., 991
 Rhodes, R. A., 490
 Ribbons, Douglas W., 438
 Richardson, B., 245
 Riley, Harris D., Jr., 193
 Riley, Mel J., 861
 Roberts, Merritt E., 861
 Robertson, John H., 396
 Robinson, C. T., 410
 Robinson, John A., 1091
 Rocha, Heonir, 547
 Rogers, Ruth, 848
 Ross, Harold, 555
 Rowlands, John R., 650
 Roy, A., 668
 Rozzell, Allen R., 420
 Rubenstein, Howard S., 177
 Rueter, A., 1057
 Ruschi, A., 531
 Sacks, L. E., 416
 St. Julian, G., 490
 Salmirs, Seymour, 680
 Samuels, Sally B., 1015
 Sanford, Jay P., 276
 Saslaw, Samuel, 1077
 Satterlee, L. D., 240
 Schaedler, Russell W., 142
 Schelhart, Dorothy, 393
 Schleicher, J. B., 1057
 Schmale, John D., 337
 Schmidt, Jerome P., 147
 Schmidt, Nathalie J., 500
 Schneierson, S. Stanley, 601
 Schuessler, Ronald G., 965
 Schwertner, H. A., 245
 Scotti, T., 464
 Searcy, J. W., 622
 Sehgel, S. N., 270
 Servin-Massieu, Manuel, 689
 Sessoms, A. R., 542
 Sever, John L., 1094
 Shahidi, Azra, 766
 Shannon, C. A., 24, 636
 Sharma, R. M., 589
 Sherris, John C., 452
 Sherry, E. J., 901
 Shklair, I. L., 684
 Siegel, Marie, 387, 656
 Singh, Kartar, 270
 Sippel, John E., 522
 Skau, Evald L., 1050
 Slack, John M., 80
 Smith, J. W., 946
 Smith, P. B., 991
 Solar, James M., 1050
 Sorg, Thomas J., 294
 Spalla, C., 464
 Spector, Sheldon L., 736
 Srinivasan, V. R., 131
 Stamer, J. R., 323
 Stamm, John M., 376
 Stark, Raymond L., 631
 Steinberg, M. P., 68
 Stern, J. A., 901
 Stewart, Dorothy, 76
 Stottmeier, K. D., 399
 Stoyla, B. O., 323
 Strander, H., 810
 Strickland, Robert H., 628
 Stroup, W. H., 889
 Stroy, S. Ann, 31
 Strzelecki, Edward, 938
 Sturtevant, Alton B., Jr., 918
 Stutzenberger, Fred J., 8
 Suggs, Morris T., 816, 824
 Sullivan, Hugh R., 310
 Sultan, William W., Jr., 688
 Surgalla, Michael J., 834
 Sutter, Richard P., 525
 Suzuki, Toshiyuki, 1031
 Takatsuki, Akira, 660
 Tamara, Gakuzo, 660
 Tan, P. L., 1089
 Tanguay, A. E., 1088
 Tardrew, P. L., 159
 Tauraso, Nicola M., 294, 736
 Taylor, Welton I., 393
 Tenney, Mark W., 965
 Terry, Robert T., 307
 Thayer, James D., 21, 337
 Thomson, R. O., 874
 Thrupp, L. D., 156
 Tilton, B. E., 533
 Titsworth, E., 207
 Tognoli, G., 464
 Toole, Roberta F., 433
 Traub, Walter H., 51
 Trimmer, Roy, 294
 Tsuji, Kiyoshi, 396
 Turner, Willie, 474
 Ueno, Yoshio, 406
 Ulrich, John A., 692
 Underdahl, Norman R., 961
 Valkenburg, Hans A., 57
 van Soestbergen, A. A., 350, 1092
 Vaughn, Reese H., 771, 925
 Vedamuthu, E. R., 755
 Vezina, Claude, 270
 Vincent, William F., 954
 Vogel, H., 282
 Vogel, R. A., 1100
 von Klopotek, A., 41
 Wahren, Ann, 235
 Waiker, P. D., 874
 Wallis, Craig, 1007
 Walter, W. M., Jr., 856
 Wang, Chia-Li, 677
 Warner, John F., 404
 Warren, J. C., 893
 Warren, Joel, 251
 Washam, C. J., 755
 Washington, John A., II, 95, 699
 Waslien, Carol I., 152
 Watanakunakorn, Chatrchai, 303
 Wayne, Lawrence G., 915
 Wei, L. S., 68
 Weiler, William A., 956

Weiss, Emilio, 843
Weiss, Karl F., 126, 1041
Welty, R. E., 570
Westbrook, Louise, 256
Westerberg, Stephen C., 994
White, Maurice L., 458
Wickline, Hazel E., 245
Wijesundera, S., 88
Wilcox, G. E., 268
Wiley, B. Beauford, 994
Wilkins, Judd R., 680

Wilkoff, Lee J., 256
Williams, Phletus P., 677
Williams, R. H., 14
Williamson, P., 228
Winn, William R., 458
Witter, Lloyd D., 137
Wolf, Joseph P., 4
Won, William D., 555
Woodburn, Margy, 798
Woodley, C. L., 399

Woolley, Carolyn, 284, 519
Worcester, Jane, 177

Yamaguchi, Isamu, 660
Young, Viola M., 262
Yu, Pauline K. W., 95

Zabransky, Ronald J., 198
Zaki el-Din, Manal, 313
Ziment, Irwin, 458
Zoffe, A. Z., 517

SUBJECT INDEX

VOLUME 18

- A₂ influenza**
—antiviral effect of cyclic amines, 533
- Acaricides**
—metabolized by *R. gracilis*, 972
- Acetate**
—pattern of incorporation into ochratoxin A, 622
- Acetic acid**
—effectiveness against *P. aeruginosa*, 854
- Actinomadura madurae**
—prodigiosin-like pigments from, 1
- Actinomadura pelletieri**
—prodigiosin-like pigments from, 1
- Actinomyces humiferus** sp. n.
—occurrence and characterization, 114
- Actinomyces israelii**
—pathogenicity compared with *A. naeslundii*, 427
- Actinomyces naeslundii**
—as agent of human actinomycosis, 420
—characterization of, 420
—pathogenicity compared with *A. israelii*, 427
- Actinomyces viscosus**
—identification of human strains, 80
- Actinomycetales**
— α -galactosidase activity in genera of, 579
—phylogenetic relationships of, 340
- Actinomycin D**
—effect on interferon production, 731
- Actinoplanes missouriensis**
—antibiotic peptide lactonases of, 272
- Aeration**
—applicability to isolation of salmonellae, 1060
- Aerobic bacilli**
—inhibition of spore germination, 131
- Aerobic bacteria and protozoa**
—effects of certain nitroimidazoles, 728
- Aerobic compostor**
—to destroy pathogens in sewage sludge, 994
- Aerosol-sampling technique**
—effect on recovery of airborne viruses, 893
- Aerosol stability**
—of St. Louis encephalitis virus, 880
- Aflatoxicosis**
—relation to *S. gallinarum* infections of chickens, 946
- Aflatoxin**
—effects of light, temperature, and pH on production, 517
—production by *A. flavus* on coconut, 88
—production by *A. flavus* on tobacco, 952
—production in aged salamis and cured ham, 718
—production in country cured ham, 938
—production in fresh and cured meats, 714
- Agar-diffusion microbiological assays**
—use of fast green, 1098
- Agar diffusion test system**
—for drug reversal studies, 14
- Agar in aerosol samplers**
—treatment with oxyethylene docosanols, 513
- Agar plate method**
—for detecting estrogen-producing microorganisms, 270
- Agar plate test**
—for phage induction capacity, 697
- AGDP**
—use in rubella virus hemagglutination tests, 221
- Agromyces**
—characteristics of, 340
—new genus of soil bacteria, 340
- Airborne infection**
—effect of laminar air flow, 142
—factors influencing, 142
- Airborne viruses**
—effect of prehumidification on recovery, 893
- Alaskan salmon**
—incidence of *C. botulinum* type E, 950
- Algae**
—removal from water and wastewater, 965
- Algae and bacteria**
—growth in mixed culture, 1044
- Algal flocculation**
—with synthetic organic polyelectrolytes, 965
- All-purpose broths**
—for enteric pathogens, 393
- Amantadine**
—antiviral effect on A₂ influenza, 533
- Amino acids**
—substrates for spherules and endospores, 522
- γ -Aminobutyrylhistidine**
—prophylactic effects, 641
- Ammonium acetate**
—effect on growth of resistant bacteria, 299
- Amphyll**
—effectiveness against *P. aeruginosa*, 854
- Ampicillin**
—compared with coumermycin A₁, 869
—effect on *Klebsiella*, *Enterobacter*, and *Serratia*, 198
- Ampoules**
—safe procedure for opening, 130
- Anaerobic bacteria**
—oxygen sensitivity of, 723
- Anaerobic bacteria and protozoa**
—effects of certain nitroimidazoles, 728
- Anaerobic tube dilution method**
—for determining antibiotic sensitivity, 677
- Animal by-products**
—detection of *Salmonella* in, 708
- Animal care laboratory**
—use of dust-free rooms, 142
- Animal sera**
—elimination of anticomplementary activity, 291
- Animal viruses**
—hemagglutination-hemagglutination-inhibition tests for, 824
- p-Anisidine-H₂O₂ spray**
—for isolation of peroxidase-positive microorganisms, 274
- Antibiotic activity**

- of serum, 51
- Antibiotic blood levels
 - rapid determination of, 601
- Antibiotic concentrations
 - method for estimating in human sera, 31
- Antibiotic peptide lactonases
 - from *A. missouriensis*, 272
 - substrate specificity of, 272
- Antibiotic resistance
 - incidence in bacteria from sewage, 918
- Antibiotic sensitivities
 - of ruminal bacteria, 677
- Antibiotic susceptibility
 - of *Rickettsia*, 133
- Antibiotic susceptibility testing
 - effect of mixed cultures, 766
- Anticomplementary activity
 - elimination from animal sera, 291
- Antigenic similarity
 - of three *Salmonella* serotypes, 748
- Antigens
 - produced from *N. meningitidis*, 843
- Antimycobacterial drug combinations
 - effect on *M. intracellulare*, 399
- Antisera
 - against poliovirus type 1, 98
 - protection against death by endotoxin, 177
- Anti-*Treponema pallidum* conjugates
 - effect of fluorescein to protein ratio, 806
- Antituberculous properties
 - of coumermycin A₁, 404
- Antiviral compounds
 - method for evaluation, 935
- Area-sampling technique
 - for pharyngeal cultures, 276
- Arginine hydrolysis
 - for differentiating *S. lactis* and *S. cremoris*, 755
- Ascaris lumbricoides* ova
 - survival in composted sewage, 994
- Ascending urinary tract infection
 - for studying action of nitrofurantoin, 547
- L-Asparaginase
 - optimal conditions for production, 550
 - produced by *E. aroideae*, 64
 - produced by *S. marcescens*, 550
 - sources, 64
- L-Asparaginase 2
 - production by coliform bacteria, 1025
- Aspergillus flavus*
 - factors affecting aflatoxin production, 517
 - production of aflatoxin on coconut, 88
 - production of aflatoxins in meats, 714, 718
 - production of aflatoxins on tobacco, 952
 - toxigenic strains in country cured ham, 938
- Aspergillus niger*
 - in vivo response to fungicides, 650
- Aspergillus ochraceus* Wilh.
 - biosynthesis of ochratoxin A, 622
- Aspergillus parasiticus*
 - production of aflatoxins in meats, 714, 718
- Atmospheric carbon dioxide
 - levels in bacteriological incubators, 124
- Atmospheric pollutants
 - effect on airborne *R. meliloti*, 555
- Atypical reactions
 - of *E. coli* on eosin methylene blue agar, 948
- Automated instrument
 - for fluorescent treponemal antibody-absorption test, 861
- Axilla
 - effect of demethylchlortetracycline on aerobic flora, 228
- 5-Azacytidine
 - distribution in mouse blood, 284
- Bacillus macerans* spores
 - two-phase system for partition, 416
- Bacillus* species
 - microscopic examination of, 490
- Bacillus subtilis*
 - effect on serum proteins in rats, 1072
 - effect on *S. faecalis* in mixed infection, 1072
- Bacillus subtilis*-*Streptococcus faecalis* mixed infections
 - effect on serum proteins in rats, 1072
- Bacillus subtilis* var. *niger* spores
 - thermal resistance on lander capsules, 901
- Bacitracin medium
 - for detecting *Haemophilus* species, 646
- Bacitracin technique
 - for identifying streptococci, 193
- Bacteremia
 - rapid diagnosis of, 458
- Bacteria and algae
 - growth in mixed culture, 1044
- Bacteria from clinical material
 - action of carbenicillin against, 387
- Bacterial cultures
 - under jungle conditions, 526
- Bacterial immunoabsorbent columns
 - preparation of, 874
 - regeneration of, 874
- Bacterial inhibitor
 - isolated from green olives, 856
- Bacterial spores
 - dry-heat resistance on lander capsules, 901
 - scanning electron and phase-contrast microscopy, 490
- Bacteriological incubators
 - for increasing atmospheric CO₂, 124
- Bacteriophage induction capacity
 - assayed with agar plate test, 697
- Bacteriophage production
 - in epidemiological fingerprinting, 760
- Bacteriophage sensitivity
 - in epidemiological fingerprinting, 760
- Bacteriophage typing
 - of *Salmonella*, 444, 748
- Bacteriophages
 - types in bovine rumen contents, 942
- Bacteroidaceae*
 - growth in stirred fermentors, 235
- Batch systems
 - use in studies of metabolic control mechanisms, 776, 785
- Beans
 - treatment with α -galactosidase, 579
- Benzalkonium chloride solution
 - growth of *Pseudomonas* in, 299

- Beta-lactamase genes
—properties in *S. aureus*, 628
—properties in *S. epidermidis*, 628
- Betadine
—effectiveness against *P. aeruginosa*, 854
- BHK-21 cell cultures
—production of La Crosse virus antigens, 433
- BHK-21 cell passage
—for propagation of MM virus in L cells, 584
- BHK-21 cells
—complement-fixing antigen produced in, 496
- Black walnut meats
—incidence of *E. coli* in, 925
- Blood culture techniques
—use of membrane filters, 458
- Blood group activity of bacteria
—effect of cultural environment, 262
- Bluosomycin
—chemotherapeutic activity, 509
- Bordetella pertussis* serotypes
—in the United States, 618
- Bovine cell cultures
—antigenicity of influenza vaccine from, 596
- Bovine rumen contents
—types of bacteriophages in, 942
- Brain Heart Infusion Broth
—detection of enterotoxin B in, 631
- Brevibacterium ammoniagenes* mutant
—accumulation of 5' inosinic acid, 977
- Brilliant Green
—effect on motility of salmonellae, 542
—effect on motility of selected microorganisms, 542
- Broth cultures
—detection of nuclease activity in, 174
- Broth media
—for isolation of L-phase organisms, 535
- Brucella abortus*
—mitomycin C for distinguishing strains, 511
- Byssoschlamys*
—control in grape products, 166
- Cabbage hybrids
—fermentation patterns of, 323
- Cake mixes
—detection of *Salmonella* in, 838
- Calcium leucovorin
—microbiological assay for, 1088
- Calves
—transferable drug resistance among *Enterobacteriaceae* from, 961
- Candida albicans*
—survival in composted sewage, 994
- Candies
—detection of *Salmonella* in, 838
- Carbenicillin
—compared with ampicillin and cephalothin, 387
—effect on bacteria from clinical material, 387
—possible synergism with gentamicin or polymyxin B, 469
—susceptibility of *P. aeruginosa* to, 303
- Carbenicillin and gentamicin
—susceptibility of *P. aeruginosa*, 303
- Carbohydrate antigen
—produced from *N. meningitidis*, 843
- Carbohydrates
—degraded by α -galactosidase, 579
—effect on bacterial degradation of lysine, 790
—substrates for spherules and endospores, 522
- Carbon source
—effect on galactosidase production by *C. rolfsii*, 1036
- Carpeting
—biological evaluation of, 180
- Carrier cultures
—as a source of *Salmonella* phages, 444
- Catalase-negative bacteria
—predominance in organically rich soils, 114
—predominance in various soils, 340
- Catalase-positive actinomycetes
—classified as *A. viscosus*, 80
—compared with *A. viscosus* and *A. naeslundii*, 80
- Cationic exchange resins
—microbiological study of, 376
- Cell permeability
—effect of lomofungin, 35
- Cephalosporins
—effect on *Klebsiella*, *Enterobacter*, and *Serratia*, 198
- Chelating agents
—effect on *Salmonella* in egg white, 318
- Chemical flocculation techniques
—for removal of algae from water, 965
- Chemotherapeutic agents
—studied with rat pyelonephritis model, 448
- Chickens
—relation of aflatoxicosis to *S. gallinarum* infections, 946
- Chloranil
—in vivo response of *A. niger* to, 650
- Chlorella sorokiniana*
—bacteria growing in association with, 1044
- Chlorobenzilate
—metabolized by *R. gracilis*, 972
- Chloroform and moderate temperature
—for inactivation of reovirus type 2, 940
- Chloropropylate
—metabolized by *R. gracilis*, 972
- Chymotrypsin
—effect on plaque formation by fowlpox virus, 897
- Citral
—metabolized by a pseudomonad, 1084
- Citrate
—effect on inhibition of glutamate synthesis, 287
- Citric acid cycle intermediates
—effect on metabolism of acaricides, 972
- Citronellal
—metabolized by a pseudomonad, 1084
- Classical chain of *Salmonella* infection
—lack of importance in Denmark, 985
- Claviceps purpurea*
—production of peptide ergot alkaloids, 464
- Clinical sources
—characterization of *Micrococcaceae* from, 95
- Clinical specimen
—isolation of L-phase organisms, 535
- Clostridia
—metabolic pathways for classification, 744
- Clostridial classification

- glycolytic and related enzymes in, 744
- Clostridium botulinum*
 - fatty acid composition of, 883
- Clostridium botulinum* spores
 - destruction by radiation sterilization, 604
 - resistance to UV and gamma rays, 44
- Clostridium botulinum* type E
 - incidence in Alaskan salmon, 950
- Clostridium botulinum* types A and B
 - differentiated from types E and F, 883
- Clostridium perfringens*
 - handled with double-closed Hungate tubes, 558
 - response of white mice to, 240
 - water activity for growth, sporulation, and germination, 798
- Clostridium perfringens* type A
 - determination of virulence indicators, 668
- Clostridium thermosaccharolyticum*
 - sporulation of, 958
- Coagulase assay system
 - made more sensitive, 906
- Coagulase clotting
 - activated by trypsin inhibitor, 906
- Coagulase-negative staphylococci
 - incidence among clinical isolates, 95
- Coagulase production
 - relation to deoxyribonuclease product/n, 126
- Coccidioides immitis*
 - substrates for spherules and endospores, 522
- Coccoid cells
 - separated from vibrioid cells of *V. fetus*, 1096
- Coconut
 - as medium for production of aflatoxin, 88
 - compared with peanut as a medium, 88
- Coliforms
 - production of L-asparaginase 2, 1025
 - survival after incineration of refuse, 8
- Colistin
 - effectiveness against *P. aeruginosa*, 854
- Colony-forming bacteria
 - counted by pour plate and streak plate methods, 1092
- Complement fixation
 - serological test for gonococcal infection, 337
- Complement-fixing antigen
 - from lymphocytic choriomeningitis virus-infected cells, 496
- Composted sewage
 - survival of human pathogens, 994
- Congo red-agar plating medium
 - for detecting pigmentation in *P. pestis*, 834
- Continuous culture
 - for growth of unicellular algae, 245
- Continuous-flow systems
 - use in studies of metabolic control mechanisms, 790
- Correlation analysis
 - for determining virulence indicators, 668
- Corticium rolfsii*
 - production of α - and β -galactosidases, 1036
- Corynebacterium glutamicum*
 - glutamic acid production by, 287
- Cotton plugs
 - compared with stainless-steel closures, 525
- Coumestrol A₁
 - effect on *M. tuberculosis* var. *hominis*, 404
 - in vitro activity of, 869
- Country cured ham
 - aflatoxin production in, 718, 938
- m-Cresol*
 - production by *V. friesii*, 515
- Cross-reacting agglutinins
 - removal from type-specific antisera, 874
- Cryptococcus neoformans*
 - primary isolation medium for, 1100
- Cultivation method
 - for *Bacteroidaceae*, 235
- Cultural conditions
 - for production of L-asparaginase 2, 1025
- Cultural environment
 - effect on blood group activity of bacteria, 262
- Culture media
 - for isolating salmonellae from feces, 589
 - for isolation of tubercle bacilli, 915
- Cyanmethemoglobin assay
 - for standardizing erythrocyte suspensions, 816
- Cyclic amines
 - antiviral effect on A₂ influenza, 533
- Cyclooctylamine
 - antiviral effect on A₂ influenza, 533
- Cystic fibrosis patients
 - isolation of mucoid strains of *P. aeruginosa*, 936
- Dairy products
 - thermal inactivation of viruses in, 889
- Dark-field photography
 - of immunodiffusion bands, 280
- Debaromyces hansenii*
 - effects of topical anesthetics, 365
- Decontamination
 - of walnut meats bearing *E. coli*, 925
- Deguelin
 - effect on animal and plant viruses, 660
- Delayed addition of selenite
 - applicability to isolation of salmonellae, 1060
- Demethylchlortetracycline
 - effect on human cutaneous microflora, 228
- Denmark
 - distribution of *Salmonella* types, 985
- Deoxyribonuclease-producing bacteria
 - medium for detection, 991
- Deoxyribonuclease production
 - relation to coagulase production, 126
- Deoxyribonucleic acid melting point determinations
 - with electrically heated cuvette chamber, 528
- Deoxyribonucleic acid synthesis
 - role in interferon production, 731
- Diagnostic antigens
 - of La Crosse virus, 433
- Diagnostic protocol
 - for differentiating *Mima-Herellea* and *Neisseria* species, 575
- Dialysis method
 - for labeling anti-*T. pallidum* conjugates, 806
- Diatomaceous filter aid
 - for control of fungi in grape products, 166
- Differential agar medium
 - for separating *S. lactis* and *S. cremoris*, 755
- Digestion techniques

- for isolation of tubercle bacilli, 915
- Diluent composition
 - effect on recovery of *E. coli*, 956
- Diluents
 - for rubella virus hemagglutination tests, 221
- Dimethylsulfoxide
 - stability of rifampin in, 692
- Domestic fowl
 - association with *Salmonella*, 703
- Double-closed method
 - for Hungate tubes, 558
- Dried pathogens
 - removal from evacuated ampoules, 130
- Dry-heat sterilization
 - of lander capsule surfaces, 901
- Dust-free rooms
 - medical applications, 142
- Egg noodles
 - detection of *Salmonella* in, 838
- Egg white
 - pasteurization process, 318
- Electrically heated cuvette chamber
 - for DNA melting point determinations, 528
- Electron capture detector
 - for assay of pyrrolnitrin, 310
- Electron spin resonance spectroscopy
 - for study of response to fungicides, 650
- Embryonated chicken eggs
 - influenza vaccine derived from, 596
- Encephalomyocarditis virus
 - rapid plaque assay for, 932
- Endotoxin
 - effect on serum zinc concentrations, 482
 - protection against by antisera, 177
- Enterobacter*
 - differentiation from *Klebsiella* and *Serratia*, 198
 - distinguished from *Klebsiella*, 156
 - susceptibility to selected antibiotics, 198
- Enterobacter-Klebsiella* group
 - characterization of ornithine decarboxylase-positive, nonmotile strains, 566
- Enterobacteriaceae*
 - rapid identification of, 207
 - transferable drug resistance among, 961
- Enterococci
 - isolated with thallium acetate-citrate medium, 944
- Enterotoxin
 - production by *S. aureus*, 126
- Enterotoxin A
 - purification and recovery, 1089
- Enterotoxin B
 - immunofluorescent detection of, 631
- Enterotoxin production
 - estimated by degree of cell fluorescence, 631
- Enterotoxins A, B, and C
 - production in various media, 1041
- Enterotube
 - compared with PathoTec system, 207
 - for identification of *Enterobacteriaceae*, 207
- Enumeration procedures
 - for heat-injured *Salmonella*, 332
- Environmental factors
 - effect on airborne *R. meliloti*, 555
- Environmental temperature
 - effect on resistance to endotoxin, 177
- Enzymatic reduction
 - of iron oxide, 41
- Enzyme inhibitors
 - effect on *P. fragi* lipase, 108
- Enzymes
 - catalyzing transformation of Karsil, 369
- Eosin methylene blue agar
 - atypical reactions of *E. coli* on, 948
- Epidemiological fingerprinting
 - of *P. aeruginosa*, 760
- Epoxy group
 - effect on antimicrobial activity of amides, 1050
- Equilin
 - production from steroids, 270
- Erwinia aroideae*
 - L-asparaginase production by, 64
- Erythrocyte suspensions
 - procedure for standardizing, 816
- Erythromycin
 - antibacterial activity of 2'-esters, 159
- Erythromycins
 - compared with triacetyloleandomycin, 1077
- Escherichia coli*
 - effect of Brilliant Green on motility, 542
 - effect of diluent composition on recovery, 956
 - for assay of 5-azacytidine in mouse blood, 284
 - in assay of antibiotic activity of serum, 51
 - in assay of antibiotic blood levels, 601
 - incidence in black walnut meats, 925
 - production of L-asparaginase 2, 1025
 - quantitated in urine culture, 57
 - reactions on eosin methylene blue agar, 948
 - sensitivity to selenite, 1060
- Escherichia coli* B
 - DNA melting point of, 528
- Escherichia coli* counts
 - supplemented by *Salmonella* counts, 985
- Esterification in the 2'-position
 - effect on activity of erythromycin, 159
- 2'-Esters of erythromycin
 - antimicrobial activity of, 159
- Estrogens
 - production from steroids, 270
- Estuarine waters
 - most probable number test for fecal streptococci, 562
- Ethylene oxide
 - for sterilization of polyvinyl trays, 1057
- Experimental models
 - for studying action of nitrofurantoin, 547
- Extraction procedures
 - for liberation of L-asparaginase, 64
- Fabrics
 - persistence of *S. typhimurium* on, 256
- Fallout contamination
 - recovered with vacuum probe, 1002
- Fast green
 - in agar diffusion microbiological assays, 1098
- Fat accumulation
 - in algae, 245
- Fatty acid composition

- of *C. botulinum*, 883
- Fatty acids
 - for differentiating *C. botulinum* types, 883
- Fecal streptococci
 - detection in marine waters, 562
- Feces
 - media for isolation of salmonellae, 589
- Fermentation capacity
 - of rumen microorganisms, 313
- Fermentation conditions
 - for high yield of L-asparaginase, 550
- Fermentation patterns
 - of cabbage hybrids, 323
- Fermentation processes
 - production of nucleic acid-related substances, 977
- Flagellar sera
 - for immunofluorescent staining of *Salmonella*, 612
- Flatus-inducing factors
 - elimination from beans, 579
- Flocculants
 - for removal of algae from water, 965
- Fluorescein to protein ratio
 - effect on anti-*T. pallidum* conjugates, 806
- Flue-cured tobacco
 - production of aflatoxins by *A. flavus*, 952
- Fluorescent-antibody reagents
 - staining reactions with polioviruses, 98
- Fluorescent-antibody studies
 - with antisera against poliovirus type 1, 98
- Fluorescent-antibody technique
 - for detecting enterotoxin B, 631
 - for identifying streptococci, 193
 - for studying *A. viscosus*, 80
- Fluorescent treponemal antibody-absorption test
 - automated instrument for, 861
- Fluoride
 - effect on glutamic acid production, 287
- Food poisoning symptoms
 - caused by *C. perfringens* compounds, 240
- Food products
 - detection of *Salmonella* in, 708
- Food value in algae
 - increased by nitrogen limitation, 245
- Forehead
 - effect demethylchlortetracycline on aerobic flora, 228
- Formulation factors
 - of Southern custard pie, 68
- Four-hour urease test
 - compared with motility test, 156
 - for identifying *Klebsiella* and *Enterobacter*, 156
- Fowlpox virus
 - effect of chymotrypsin on plaque formation, 897
- Freeze-drying
 - induction of variants of *S. marcescens*, 689
- Freezing
 - effect on bacterial inhibitor in olives, 856
- Freezing point depression method
 - for determination of water activity, 798
- Frozen foods
 - isolation of enterococci from, 944
- Fructose
 - effect on bacterial degradation of lysine, 785, 790
- Fungi
 - effect of lomofungin, 35
 - effects on tobacco, 570
 - enzymatic reduction of iron oxide, 41
- Fungi of tobacco
 - mouse toxicity of, 570
- Fungicides
 - in vivo response of *A. niger* to, 650
- α -Galactosidase activity
 - in genera of *Actinomycetales*, 579
- Galactosidases
 - produced by *C. rolfii*, 1036
- Gamma radiation
 - effect on *C. botulinum* spores, 44
 - for inactivation of Venezuelan equine encephalomyelitis hemagglutinin, 278
- Gas-liquid chromatography
 - for assay of neomycins B and C, 396
 - separation of pyrrolnitrin and derivatives, 310
 - with flame and electron capture detectors, 310
- Gaseous exchange
 - during bacterial growth on methane, 438
- Gentamicin
 - effectiveness against *P. aeruginosa*, 854
 - possible synergism with carbenicillin, 469
- Gentamicin and carbenicillin
 - susceptibility of *P. aeruginosa*, 303
- Glass apparatus system
 - for detection of *Salmonella* in foods, 838
- Glucose
 - effect of temperature on utilization by *P. fluorescens*, 137
 - effect on bacterial degradation of lysine, 776, 790
 - production of xylitol from, 1031
- Glutamic acid production
 - inhibition by iodoacetate and fluoride, 287
- Glycolytic and related enzymes
 - in clostridial classification, 744
- Gonococcal antigens
 - for detection of gonococcal antibody, 337
- Gotschlich procedure
 - modification of, 843
- Grain
 - role in *Salmonella* cycle, 911
- Gram-negative bacilli
 - activity of 6-(D- α -sulfoaminophenylacetamido)-penicillanic acid, 76
- Gram Negative Broth
 - compared with Rappaport's Enrichment Broth, 393
- Gram-negative organisms
 - identified with paper-reagent strips, 452
- Gram-positive bacteria
 - effect of 3,3',5,5'-tetrachlorotetranitro-diphenylamine, 684
- Gram-positive cocci
 - predominance during shrimp processing, 188
- Grape products
 - control of heat-resistant fungi in, 166
- Gravity
 - effect on morphology of staphylococci, 680
- Green olives
 - isolation of a bacterial inhibitor, 856

- Group A streptococci
—detection of deoxyribonuclease activity, 991
—identified with commercial reagents, 193
—improved growth medium for, 954
Growth medium
—for group A streptococci, 954
Guanine-type compounds
—reversal of activity of mycophenolic acid, 14
Guinea pig cells
—for titrating rubella virus, 251
Gulf of Aarhus
—*Salmonella* types isolated from, 985
- Haemophilus* species
—culture medium for selective isolation, 646
Handling contamination
—recovered with vacuum probe, 1002
Heat
—effect on *P. fragi* lipase, 108
Heat-resistant fungi
—control in grape products, 166
Hektoen enteric agar
—for isolation of salmonellae and shigellae, 656
Hemagglutination-hemagglutination-inhibition tests
—description and evaluation, 824
—use of standardized erythrocyte suspensions, 816
Hemagglutination-inhibition antibody titers
—determined with macro- and micromethod, 596
Hemagglutinins
—of Venezuelan equine encephalomyelitis virus, 278
Hepatotoxic pigment
—produced by *P. islandicum* Sopp, 406
Herellea vaginicola
—differentiation from similar organisms, 1015
—schema for identification, 1015
Herpes simplex virus
—effects of rotenoids, 660
Heterotrophic bacteria
—growing with *C. sorokiana*, 1044
Histoplasmin hypersensitivity
—detected with M-deficient skin-test antigen, 307
Histoplasmin skin-test antigen
—deficient in M component, 307
Homocarnosine
—prophylactic effects, 641
Human actinomycosis
—*A. naeslundii* as a possible agent, 420, 427
Human cutaneous microflora
—effect of demethylchlorotetracycline, 228
Human enteroviruses
—isolated from mussels, 531
Human leukocyte suspensions
—production of interferon in, 810
Human leukocytes
—interferon production by, 731
Human neoplasia
—treatment with L-asparaginase, 64
Human pathogens
—survival in composted sewage, 994
Human sera
—estimation of antibiotic concentrations, 31
Hungate tubes
—double closures for, 558
- Hydrogenomonas eutropha*
—nutritional value of lipids in, 152
 β -Hydroxybutyric acid
—nutritional value of, 152
- Immune globulin
—effect of treatment with kaolin, 410
Immunodiffusion bands
—dark-field photography of, 280
Immunofluorescence
—for detection of lymphocytic choriomeningitis virus antibody, 289
Immunofluorescence assay
—for *Salmonella* in food products, 708
—for *Salmonella* in nonfat dry milk, 328
Immunofluorescence staining
—of *Salmonella* species, 612
Immunofluorescence tests
—automated instrument for, 861
In-shell black walnuts
—incidence of *E. coli* in, 925
Incinerator operations
—microbiological evaluation, 8
Incubation temperature
—effect on aflatoxin production, 88
Incubation time
—effect on production of staphylococcal enterotoxins, 1041
Infectious agents in monkeys
—negative-pressure isolator used with, 294
Infectious drug resistance
—incidence among lactose-fermenting bacteria, 918
Influenza
—resistance of mice to, 147
Influenza vaccine
—prepared from bovine cell cultures, 596
—prepared from chicken embryos, 596
Inhibition of dextrose fermentation
—in assay of antibiotic blood levels, 601
Inoculum size
—effect on activity of 6-(D- α -sulfoaminophenylacetamido)-penicillanic acid, 76
5' Inosinic acid
—accumulation by a *B. ammoniagenes* mutant, 977
Insoluble polyelectrolytes
—concentration of viruses on, 1007
Interferon
—effect on growth of MM virus in L cells, 584
—induced by statolon, 147
—produced by human leukocytes in vitro, 731
—production in human leukocyte suspensions, 810
Interferon induction
—in treatment of murine sarcoma virus, 477
Intraperitoneal injections
—for bioassay of fungal toxins, 570
Iodoacetate
—effect on glutamic acid production, 287
Iron oxide
—enzymatic reduction by fungi, 41
Iron-reducing ability
—of fungi, 41
- Jungle conditions
—use of agar plates for cultures, 526

- Kaolin treatment
—effect on sera and immune globulin, 410
- Karsil
—biochemical decomposition of, 369
Karsil-decomposing microorganisms
—isolation of, 369
- Klebsiella*
—differentiation from *Enterobacter* and *Serratia*, 198
—distinguished from *Enterobacter*, 156
—susceptibility to selected antibiotics, 198
- Klebsiellaceae*
—biochemical differentiation of, 198
- L cells
—propagation of MM virus in, 584
- L-phase organisms
—identified by reversion to bacterial form, 535
—media for isolation, 535
- La Crosse virus antigens
—preparation in BHK-21 cell cultures, 433
—sensitivity and storage stability, 433
- Labeling methods
—for anti-*T. pallidum* conjugates, 806
- Laboratory model man
—for evaluation of drug combinations, 399
- Lactobacillus*
—isolated from refrigerated dough products, 848
- Lactose-fermenting bacteria
—infectious drug resistance among, 918
- Laminar air flow
—effect on airborne infection, 142
- Lancefield precipitin technique
—for identifying streptococci, 193
- Lander capsule surfaces
—dry-heat resistance of spores on, 901
- Large-plate method
—for assay of neomycin in serum, 350
- Leuconostoc*
—isolated from refrigerated dough products, 848
- Light
—effect on aflatoxin production, 517
- Light scattering
—compared with plate count method, 4
—for determining growth of *M. laidlawii*, 4
- Lipase
—from *P. fragi*, 104, 108
—isolation procedures, 104
—properties, 104, 108
—purification, 104
- Lipids
—nutritional value in *H. eutropha*, 152
- Liquid chamber
—for trapping enterotoxin A during electrophoresis, 1089
- Liquid overlay plaquing technique
—for assay of encephalomyocarditis virus, 932
- Lomofungin
—mode of action, 35
—properties, 35
- Long-chain fatty acids
—antimicrobial activity of *N*-substituted amides, 1050
- Lower respiratory tract infections
—relation to microorganisms in sputum, 214
- Luteoskyrin
—production by *P. islandicum* Sopp, 406
- Lymphocytic choriomeningitis virus
—production of complement-fixing antigen, 496
- Lymphocytic choriomeningitis virus antibody
—detection in murine sera, 289
- Lysine
—bacterial degradation of, 776, 785, 790
- M-deficient histoplasmin
—use in immunological studies, 307
- Marine waters
—most probable number test for fecal streptococci, 562
- Meats
—aflatoxin production in, 714, 718
- Media
—effect on production of staphylococcal enterotoxins, 1041
—for differentiating nonfermenting gram-negative bacteria, 355
- Media of controlled water activity
—growth, sporulation, and germination of *C. perfringens* in, 798
- Membrane filter technique
—for recovering bacteria from blood, 458
- Mengovirus-37A
—effect of prehumidification on recovery from air, 893
- Metabolic control mechanisms
—in a natural microbial population, 776, 785, 790
- Metabolic pathways
—for classification of clostridia, 744
- Metabolic state
—of organisms in their habitat, 1065
- Metal ions
—effect on *P. fragi* lipase, 108
- Methicillin resistance
—of *S. aureus*, 699
- Methyl anthranilate
—inhibitor of spore germination, 131
- Methyl green
—for detecting deoxyribonuclease-producing bacteria, 991
- Methyl green decolorization
—basis of micro test, 204
- 2-Methyl-5-nitroimidazole-1-ethanol
—effects on bacteria and protozoa, 728
- Metronidazole
—effects on bacteria and protozoa, 728
- Mice
—effect of tremorgenic toxin on, 128
—resistance to influenza, 147
- Micro test
—compared with alcohol precipitation test, 204
—for streptococcal anti-deoxyribonuclease B, 204
- Microbial flora
—of Pacific shrimp, 188
—of refrigerated dough products, 848
- Microbial load
—of Pacific shrimp, 188
- Microbial medium
—use with nitrate ion-selective electrode, 479
- Microbiological air sampling
—prolonged by monolayer on agar gel, 513

- Microbiological assay
—for estimating antibiotic concentrations, 31
—of pseudourea, 519
—of responses to neomycins B and C, 396
- Micrococcaceae*
—characterization of, 95
- Microhemagglutination assay
—for *T. pallidum* antibodies, 485
- Microneutralization procedures
—microtransfer technique for, 1094
- Microscopy
—of microorganisms in their habitat, 1065
- Microtransfer technique
—for microneutralization procedures, 1094
- Military recruits
—isolation of *N. meningitidis* group Y, 1091
- Mima*
—differentiation from *Herellea*, 1015
- Mima-Herellea* group
—protocol for identification of, 575
- Minocycline
—compared with coumermycin A₁, 369
- Mitomycin C
—for distinguishing *B. abortus* strains, 511
- Mixed bacterial infections
—effect on serum proteins in rats, 1072
- Mixed cultures
—effect on antibiotic susceptibility testing, 766
- MM virus
—effect of interferon on growth in L cells, 584
- Mn²⁺
—effect on 5' inosinic acid accumulation, T-4
- Moderate anaerobes
—oxygen sensitivity of, 723
- Moderate temperature and chloroform
—for inactivation of reovirus type 2, 940
- Monkeys
—hazardous infectious agents in, 294
—therapy of staphylococcal infections, 1077
- Monohydric phenols
—production of *m*-cresol of *V. friesii*, 515
- Moraxella*
—differentiation from *Herellea*, 1015
- Most probable number test
—for fecal streptococci in marine waters, 562
- Motility test
—to differentiate *Klebsiella* from *Enterobacter*, 566
- Mouse blood
—distribution of 5-azacytidine in, 284
- Mucoid strains
—of *P. aeruginosa*, 936
- Municipal refuse
—efficacy of incineration, 8
- Murine sarcoma virus
—therapy with interferon stimulator, 474
- Murine sera
—detection of lymphocytic choriomeningitis virus antibody, 289
- Mussels
—isolation of human enteroviruses, 531
- Mycobacteria
—cultured in bacteriological incubator, 124
- Mycobacterium intracellulare*
—effect of various drug combinations, 399
- Mycobacterium tuberculosis*
—recovered in bacteriological incubator, 124
- Mycobacterium tuberculosis* var. *hominis*
—effect of coumermycin A₁, 404
- Mycophenolic acid
—in vitro antiviral activity, 14
—reversal of activity, 14
- Mycoplasma laidlawii*
—growth determined by light scattering, 4
- Mycoplasmas
—effect of UV on single cells and aggregates, 360
- N*-substituted amines
—antimicrobial activity of, 1050
- Natural microbial population
—control mechanisms operative in, 776, 785, 790
- Negative-pressure isolator
—for work with infectious agents in monkeys, 294
- Neisseria gonorrhoeae*
—reactivity of two selected antigens, 337
—susceptibility to nine antimicrobial agents, 21
- Neisseria meningitidis*
—carbohydrate antigen produced from, 843
—effect of 3,3',5,5'-tetrachlorotetranitrodiphenylamine, 684
- Neisseria meningitidis* group Y
—sulfadiazine susceptibility patterns, 1091
- Neisseria* species
—protocol for identification of, 575
- Neomycin
—assayed in serum by large-plate method, 350
- Neomycins B and C
—comparative study of responses to, 396
- Neonatal diarrhea
—transferable drug resistance among *Enterobacteriaceae*, 961
- Net growth rates
—of rumen microorganisms, 313
- Neuraminidase
—toxicity assayed in white mouse, 240
- Neutralization of yellow fever virus
—factors affecting, 736
- Newcastle disease virus
—effects of rotenoids, 660
- Nitrate ion-selective electrode
—to follow reduction of nitrate to nitrite, 479
- Nitrofurantoin
—site of action in urinary tract infection, 547
- Nitrogen limitation
—effect on unicellular algae, 245
- 1-(2-Nitro-1-imidazolyl)-3-methoxy-2-propanol
—effects on bacteria and protozoa, 728
- Nocardia asteroides*
—isolated with paraffin bait technique, 686
- Nocardiosis
—paraffin bait technique for diagnosis, 686
- Nonfat dry milk
—immunofluorescent assay for *Salmonella*, 328
- Nonfermenting gram-negative bacteria
—media for differentiation evaluated, 355
- Novobiocin
—compared with coumermycin A₁, 869
- Nuclease activity
—detection in semisolid and broth cultures, 174

- Nucleic acid-acridine orange interaction
—for detection of nuclease activity, 174
Nucleic acid-related substances
—production by fermentative processes, 977
Numerical taxonomy
—of bacteria growing with *C. sorokiana*, 1044
- O antigens
—site of surface staining of salmonellae, 612
Ochratoxin A
—biosynthesis of, 622
Olives
—pink yeasts associated with softening, 771
Opening procedure
—for evacuated glass ampoules, 130
Oral microorganisms
—identified by agar-diffusion methods, 1098
Organically rich soils
—incidence of an *Actinomyces* species, 114
Ornithine decarboxylase test
—to differentiate *Klebsiella* from *Enterobacter*, 566
Oxyethylene docosanols
—for treatment of agar in aerosol samplers, 513
Oxygen sensitivity
—of various anaerobic bacteria, 723
- Pacific shrimp processing
—microbiological evaluation, 188
Palm wine
—preservation by sulfite, 122
Paper-reagent strips
—compared with biochemical tests, 452
—in identifying gram-negative organisms, 452
Paraffin bait technique
—for isolating *N. asteroides*, 686
Partition of spores
—by modified two-phase system, 416
Pasteurella pestis
—medium for detecting pigmentation, 834
Pathogenic cryptococci
—medium selective for, 1100
Pathogenic treponemes
—automatic assay for antibodies to, 485
PathoTec system
—compared with enterotube system, 207
Pediococcus cerevisiae
—in assay of calcium leucovorin, 1088
Penicillin G
—activity against gonococci, 21
—activity compared with seven antibiotics, 21
Penicillium islandicum Sopp
—production of luteoskyrin, 406
Penicillium palitans
—tremorgenic toxin from, 128
Penicillium species
—decomposition of Karsil, 369
Pentitol
—production by yeasts, 1031
Peptide ergot alkaloids
—produced by *C. purpurea*, 464
Peptones
—effect on blood group activity of bacteria, 262
Peroxidase-producing microorganisms
—enumeration and isolation, 274
- pH
—effect on aflatoxin production, 517
—effect on preservation of palm wine, 122
—effect on production of staphylococcal enterotoxins, 1041
—effect on *Salmonella* in egg white, 318
pH control
—for growth of *Bacteroidaceae*, 235
Pharyngeal cultures
—area-sampling technique for, 276
Phase-contrast microscopy
—of bacterial spores, 490
Phenolic compound
—isolated from green olives, 856
Phenylalanine
—incorporation into ochratoxin A, 622
Phenylalanine deaminase activity
—in *P. vulgaris*, 688
Phospholipase C
—produced by a *Pseudomonas* species, 500
—toxicity assayed in white mice, 240
Phosphorylcholine
—toxicity assayed in white mouse, 240
Piggy-back microtransfer technique
—description, 1094
Piglets
—transferable drug resistance among *Enterobacteriaceae* from, 961
Pigmentation
—medium for detection in *P. pestis*, 834
Pink yeasts
—associated with softening of olives, 771
Plague research
—use of Congo red-agar medium, 834
Plant foods
—*Salmonella* in, 682
Plant maturation
—effect on fermentation patterns of cabbage, 323
Plaque assay technique
—to screen for antibiotic susceptibility, 133
Plaque formation
—by fowlpox virus, 897
Plaque neutralization test
—for yellow fever virus, 736
Plasma
—effect on activity of coumermycin A₁, 869
Plasmin
—effect of coagulase clotting, 906
Poliovirus type 1
—studies with antisera against, 98
—survival in composted sewage, 994
Polyacrylamide gel electrophoresis
—for isolation of enterotoxin A, 1089
Polyelectrolyte-concentration method
—for detection of viruses in sewage, 1007
Polymyxin B
—effectiveness against *P. aeruginosa*, 854
—possible synergism with carbenicillin, 469
Polyribonucleic acid: polyribocytidylic acid
—antiviral activity of, 474
Polyvinyl trays
—elimination of toxicity from, 1057
Porcine serum

- for removing anticomplementary activity of sera, 291
- Pork loin
 - radiation sterilization of, 604
- Poultry excreta
 - role in *Salmonella* contamination, 703
- Poultry farms
 - Salmonella* in wastes from, 703
- Pour plate method
 - compared with streak plate method, 1092
- Prehumidification
 - effect on recovery of airborne viruses, 893
- Primary bovine corneal cell cultures
 - use in virological studies, 268
- Primary or secondary screening
 - with rat pyelonephritis model, 448
- Prodiginine
 - invariant aromatic portion of prodigiosin, 1
- Prodigiosin-like pigments
 - produced by *A. madurae*, 1
 - produced by *A. pelletieri*, 1
- Proteinase
 - produced by a *Pseudomonas* species, 500
- Proteus* species
 - effect of bluensomycin, 509
- Proteus vulgaris*
 - effect of Brilliant Green on motility, 542
 - phenylalanine-negative strains, 688
- Pseudomonad*
 - metabolites produced from citronellal and citral, 1084
- Pseudomonas*
 - resistance to quaternary ammonium compounds, 299
- Pseudomonas aeruginosa*
 - effect of Brilliant Green on motility, 542
 - effect of carbenicillin combined with gentamicin or polymyxin B, 469
 - effect of germicides and drugs, 854
 - epidemiological fingerprinting of, 760
 - mucoid strains from clinical sources, 936
 - susceptibility to carbenicillin, 303, 387
 - susceptibility to carbenicillin and gentamicin combined, 303
- Pseudomonas fluorescens*
 - glucose utilization by, 137
- Pseudomonas fragi*
 - lipase from, 104, 108
- Pseudomonas* species
 - production of a proteinase and phospholipase C, 500
- Pseudourea
 - microbiological assay, 519
 - tissue distribution studies, 519
- Pullularia pullulans*
 - effects of topical anesthetics, 365
- Pulmonary infection
 - by mucoid strains of *P. aeruginosa*, 936
- Pure cultures
 - for antibiotic susceptibility testing, 766
- Pyelonephritis
 - for studying action of nitrofurantoin, 547
- Pyocin production
 - in epidemiological fingerprinting, 760
- Pyocin sensitivity
 - in epidemiological fingerprinting, 760
- Pyrolnitrin and derivatives
 - separation by gas-liquid chromatography, 310
- Quantitation method
 - for counting microorganisms in sputum, 214
- Quantitative urine culture
 - by surface drop method, 57
- Quaternary ammonium compounds
 - resistance of *Pseudomonas* to, 299
- R factors
 - incidence in bacteria from sewage, 918
- Radiation resistance
 - development in *Salmonella* cultures, 24
- Radiation sterilization
 - of pork loin, 604
- Radio-pasteurized food
 - potential hazard, 636
- Rapid plaque assay
 - for encephalomyocarditis virus, 932
 - for fowlpox virus, 897
- Rappaport's Enrichment Broth
 - compared with Gram Negative Broth, 393
- Rat
 - for testing nutritional value of lipids, 152
- Rat pyelonephritis model
 - for primary or secondary screening, 448
- Rate-zonal centrifugation
 - for separation of cell types of *V. fetus*, 1096
- Raw and treated sewage
 - infectious drug resistance among bacteria from, 918
- Reduced growth rate
 - relation to sporulation, 958
- Reduction of nitrate to nitrite
 - followed with nitrate ion-selective electrode, 479
- Refrigerated dough products
 - microflora of, 848
- Refuse-associated pathogens
 - destruction in incinerators, 8
- Relative humidity
 - effect on airborne *R. meliloti*, 555
 - effect on airborne St. Louis encephalitis virus, 880
 - effect on contamination of carpets, 180
 - effect on persistence of *S. typhimurium* on fabrics 256
 - effect on survival of *S. montevideo* on wheat, 911
- Reovirus type 2
 - inactivation of, 940
- Repeated irradiation
 - effect on *Salmonella*, 636
- Repair mechanisms
 - in *C. botulinum* spores, 44
- Respiration
 - during growth in stirred fermentors, 438
- Rhizobium meliloti*
 - survival in aerosols, 555
- Rhodotorula glutinis* var. *glutinis*
 - associated with softening of olives, 771
- Rhodotorula gracilis*
 - metabolism of Chlorobenzilate and Chloropropylate, 972

- Rhodotorula minuta* var. *minuta*
—associated with softening of olives, 771
- Rhodotorula rubra*
—associated with softening of olives, 771
- Ribose
—effect on bacterial degradation of lysine, 785, 790
- Rickettsia*
—antibiotic susceptibility, 133
- Rifampin
—stability in dimethylsulfoxide, 692
- Rotenone
—effect on animal and plant viruses, 660
- Rubella antibody
—loss from kaolin-treated immune globulin, 410
- Rubella virus
—sensitivity of tissue cultures to, 251
- Rubella virus hemagglutination tests
—analysis of diluents for, 221
- Rumen microorganisms
—factors affecting fermentation rate, 313
—factors affecting net growth, 313
- Ruminal bacteria
—antibiotic sensitivities of, 677
- S-13 coliphage
—effect of prehumidification on recovery from air, 893
- St. Louis encephalitis virus
—stability in airborne state, 880
- Salamis
—aflatoxin production in, 718
- Salmonella*
—assayed in nonfat dry milk, 328
—bacteriophage typing of, 444, 748
—detection in egg noodles, cake mixes, and candies, 838
—effect of repeated irradiation, 636
—immunofluorescence procedure for detection, 708
—in wastes from poultry farms, 703
—surveyed in plant foods, 682
- Salmonella* bacteriophages
—host range study of, 444
- Salmonella* cultures
—development of radiation resistance, 24
- Salmonella enteritidis* ser. Ordenez
—a new *Salmonella* serotype, 282
- Salmonella gallinarum* infections
—relation to aflatoxicosis in chickens, 946
- Salmonella montevideo*
—survival on wheat, 911
- Salmonella newport*
—radioresistance of, 24
—survival in composted sewage, 994
- Salmonella senftenberg*
—in egg white, 318
- Salmonella* serotype
—*S. enteritidis* ser. Ordenez, 282
- Salmonella-Shigella* agar
—for isolation of salmonellae and shigellae, 656
- Salmonella* species
—immunofluorescent staining of, 612
- Salmonella* types
—distribution in Denmark, 985
—isolated from the Gulf of Aarhus, 985
- Salmonella typhimurium*
—in egg white, 318
—persistence on fabrics, 256
—radioresistance of, 24
—thermal injury and recovery, 332
- Salmonellae*
—accelerated procedure for detection, 1060
—effect of aeration on sensitivity to selenite, 1060
—effect of Brilliant Green on motility, 542
—isolation from feces, 589
—isolation from mixture of fecal bacteria, 656
- Sarcina ureae*
—microscopic examination of, 490
- Sauerkraut
—cabbage for production of, 323
- Scanning electron microscopy
—of bacterial spores, 490
—of *S. hygroscopicus* group, 694
- Schmidt-Nank technique
—for determining minimal radiation dose, 604
- Screening test
—for phage induction capacity, 697
- Sealed agar plates
—use under jungle conditions, 526
- Secondary corneal cell cultures
—use in virological studies, 268
- Sectorization
—of *S. marcescens*, 689
- Selective culture medium
—for isolation of *Haemophilus* species, 646
- Selenite
—delayed addition in isolation of salmonellae, 1060
- Semisolid cultures
—detection of nuclease activity in, 174
- Serotypes
—of *B. pertussis* in the United States, 618
- Serratia*
—differentiation from *Enterobacter* and *Klebsiella*, 198
—susceptibility to selected antibiotics, 198
- Serratia marcescens*
—production of L-asparaginase by, 550
—variants induced by freeze-drying, 689
- Serum
—antibiotic activity of, 51
—effect on light scattering technique, 4
—neomycin assayed by large-plate method, 350
—role in the leukocyte system, 810
- Serum proteins
—effect of mixed and pure bacterial infections, 1072
- Serum zinc concentrations
—effect of endotoxin, 482
- Seven-test schema
—for identification of *H. vaginalis*, 1015
- Sewage and excreta
—concentration of viruses from, 1007
- Shaking
—effect on streptococcal cell growth, 954
- Shellfish
—as virus vehicles, 531
- Shigellae
—isolation from mixture of fecal bacteria, 656
—media for isolation, 393
- Shrimp
—microbial evaluation during processing, 188
- Shrimp slurries
—detection of enterotoxin B in, 631

- Single-cell suspensions
—in studies of mycoplasmas, 360
- Single-disc sensitivity method
—correlation with tube dilution method, 303
- Soft agar
—morphology of staphylococci in, 680
- Soil conditioners
—*Salmonella* in, 682
- Soil microorganisms
—in natural habitat and laboratory culture, 1065
- Solid media
—for isolation of L-phase organisms, 535
- Southern custard pies
—formulation and processing, 68
—growth of *S. aureus* MF 31 on, 68
- Spearman-Kärber technique
—for determining minimal radiation dose, 604
- Specimen sampling schedules
—for isolation of tubercle bacilli, 915
- Spectrophotometry
—for standardizing erythrocyte suspensions, 816
- Spore germination
—inhibited by methyl anthranilate, 131
- Spore morphology
—of *S. hygroscopicus* group, 694
- Sporulation
—of *C. thermosaccharolyticum*, 958
—relation to reduced growth rate, 958
- Sputum
—quantitation of microorganisms in, 214
- Stainless-steel closures
—compared with cotton plugs, 525
- Staphylococcal enterotoxins A, B, and C
—production in various media, 1041
- Staphylococcal infections
—resistance induced by homocarnosine, 641
—therapy in monkeys, 1077
- Staphylococci
—detection of deoxyribonuclease activity, 991
—effect of gravity on morphology, 680
- Staphylococcus aureus*
—activity of coumermycin A₁ against, 869
—beta-lactamase genes in, 628
—contamination of carpeting, 180
—deoxyribonuclease and coagulase production in, 126
—effect of erythromycin on, 159
—effect of homocarnosine, 641
—in assay of antibiotic activity of serum, 51
—in assay of antibiotic blood levels, 601
—screening for methicillin resistance, 699
—use as an assay organism, 31
- Staphylococcus aureus* MF 31
—growth on Southern custard pie, 68
- Staphylococcus epidermidis*
—beta-lactamase genes in, 628
—predominating organism in carpeting, 180
- Staphylococcus pyogenes*
—use as an assay organism, 31
- Statistical evaluation
—of hemagglutination-hemagglutination-inhibition tests, 824
- Statolon
—effect on resistance of mice to influenza, 147
- Sterilization
—of polyvinyl trays with ethylene oxide, 1057
- Steroids
—production of estrogens from, 270
- Stirred fermentors
—growth of *Bacteroidaceae* in, 235
—respiration during growth in, 438
- Stock salt brine
—use in regenerating exchange resins, 376
- Storage temperature
—effect on aflatoxin production in meats, 714
- Streak plate method
—compared with pour plate method, 1092
- Streptococcal antideoxyribonuclease B
—micro test for, 204
- Streptococcus*
—isolated from refrigerated dough products, 848
- Streptococcus cremoris*
—medium for separation from *S. lactis*, 755
- Streptococcus faecalis*
—effect on serum proteins in rats, 1072
- Streptococcus faecalis-Bacillus subtilis* mixed infections
—effect on serum proteins in rats, 1072
- Streptococcus lactis*
—medium for separation from *S. cremoris*, 755
- Streptococcus salivarius*
—use as a marker organism, 276
- Streptomyces hygroscopicus* group
—scanning electron microscopy of, 694
- Strict anaerobes
—oxygen sensitivity of, 723
- Submerged culture
—for production of peptide ergot alkaloids, 464
- Submerged fermentation
—for production of L-asparaginase, 550
- Substrate specificity
—of antibiotic peptide lactonases, 272
- Substrates
—for *C. immitis* spherules and endospores, 522
- Sulfadiazine susceptibility patterns
—of *N. meningitidis* group Y, 1091
- Sulfite
—for preservation of palm wine, 122
- 6-(D- α -Sulfoaminophenylacetamido)-penicillanic acid
—activity against gram-negative bacilli, 76
—compared with carbenicillin, 76
- Supplemented potato dextrose medium
—for isolation of *C. neoformans*, 1100
- Surface drop method
—for quantitative urine culture, 57
- Surface sampling
—with vacuum probe, 1002
- Synthetic organic electrolytes
—algal flocculation with, 965
- Syphilis
—automated instrument for detecting, 861
- Tail lesions
—quantitated in vaccinia-infected mice, 935
- Temperature
—effect on aflatoxin production, 517
—influence on glucose utilization, 137
- Terpenoids
—microbial transformation of, 1084
- TES and bovine serum albumin
—for production of serum-free interferon, 810

- 3,3',5,5'-Tetrachlorotetranitrodiphenylamine
—antibacterial properties, 684
Tetracycline
—activity against gonococci, 21
—activity compared with seven antibiotics, 21
Thallium acetate-citrate medium
—for isolation of enterococci, 944
Thermal inactivation research
—two-phase slug flow heat exchanger for, 889
Thermal injury effect
—related to *Salmonella* detection methods, 332
Thiram
—in vivo response of *A. niger* to, 650
Thorax
—in assay of calcium leucovorin, 1088
Tissue cultures
—comparative sensitivity to rubella virus, 251
Tissue distribution studies
—of pseudourea, 519
Tobacco
—effects of fungal contaminants, 570
Tobacco mosaic virus
—effects of rotenoids, 660
Top and cut surfaces of pie
—growth of staphylococci on, 68
Topical anesthetics
—effects on *P. pullulans* and *D. hansenii*, 365
Toxicity
—elimination from polyvinyl trays, 1057
Transferable drug resistance
—among *Enterobacteriaceae* from diarrhea, 961
Tremorgenic toxin
—from *P. palitans*, 128
Treponema pallidum antibodies
—microhemagglutination assay for, 485
Triacetyloleandomycin
—compared with erythromycins, 1077
Trypsin inhibitor
—for activation of coagulase clotting, 906
Trypsinase
—effect on recovery of frozen *E. coli*, 956
Tube dilution method
—correlation with single-disc method, 303
Tubercle bacilli
—isolation from clinical specimens, 915
Tuberculosis bacteriology
—comparison of methods, 915
Two-phase slug flow heat exchanger
—for thermal inactivation research, 889
Two-phase system
—for partition of *B. macerans* spores, 416
Type-specific antisera
—removal of cross-reacting agglutinins, 874

Ultraviolet and gamma rays
—combined effect on *C. botulinum* spores, 44
Ultraviolet irradiation
—effect on airborne *R. meliloti*, 555
—effect on *C. botulinum* spores, 44
—of single cells and aggregates of mycoplasmas, 360
Unicellular algae
—effect of nitrogen limitation, 245
Unsaturation
—effect on antimicrobial activity of amides, 1050

Urease activity
—for differentiating *Proteus* from enteric bacteria, 688
Urinary tract infection
—site of action of nitrofurantoin, 547

Vaccinia-infected mice
—quantitation of tail lesions in, 935
Vacuum probe
—compared with swab-rinse technique, 1002
—microbiological evaluation, 1002
Valsa friesii
—production of *m-cresol*, 515
Venezuelan equine encephalomyelitis hemagglutinins
—made nonviable by gamma radiation, 278
—prepared from tissue cultures, 278
Vesicular stomatitis virus
—effect of prehumidification on recovery from air, 893
—use as a challenge virus, 251
Vibrio fetus
—separation of cell types, 1096
Virological investigations
—use of bovine corneal cell cultures, 268
Virulence indicators
—of *C. perfringens* type A, 668
Viruses
—concentration from sewage and excreta, 1007
—thermal inactivation in dairy products, 889
Visual microscopic technique
—for microorganisms in soil and other habitats, 1065
Vitamins
—effect on blood group active organisms, 262

Water activity
—ranges for growth, sporulation, and germination of
 C. perfringens, 798
Water-softener resins
—microbiological study of, 376
Weibull technique
—for determining minimal radiation dose, 604
Wheat
—survival of *S. montevideo* on, 911
White mice
—response to *C. perfringens*, 240
Whooping cough
—*B. pertussis* serotypes causing, 618
Xyline lysine deoxycholate agar
—for isolation of salmonellae and shigellae, 656
Xylitol
—microbial production from glucose, 1031
D-Xylulose
—production of xylitol from, 1031

Yeast extract
—effect on streptococcal cell growth, 954
Yeasts
—effect of lomofungin, 35
—production of pentitol by, 1031
Yellow fever virus
—factors affecting plaque neutralization test, 736
Yellow fever virus neutralization
—factors affecting, 736

Zinc metabolism
—effect of endotoxin, 482

APPLIED MICROBIOLOGY

VOLUME 18

BALTIMORE, MD. 21202

1969

APPLIED MICROBIOLOGY

VOLUME 18 • NUMBER 6 • DECEMBER 1969

EDITORIAL BOARD

J. C. Sylvester, Editor-in-Chief
Abbott Laboratories, North Chicago, Ill.

Marvin P. Bryant, Editor (1971)
University of Illinois, Urbana

Ralph N. Costilow, Editor (1970)
Michigan State University, East Lansing

Oldrich K. Sebek, Editor (1972)
The Upjohn Co., Kalamazoo, Mich.

R. F. Acker (1972)
Milton J. Allison (1971)
Albert Balows (1971)
Nestor Bohonos (1970)
E. Arnold Branch (1969)
Alex Ciegler (1971)
Rita R. Colwell (1971)
Herald R. Cox (1969)
Marjorie A. Darken (1970)
A. L. Demain (1971)
R. N. Doetsch (1969)
John Ehrlich (1971)
James D. Fenters (1970)
William W. Ferguson (1971)
Maxwell Finland (1972)
E. M. Foster (1969)
Anthony F. Gaudy, Jr. (1970)
S.E. Gilliland (1971)

T. C. Grubb (1970)
H. Orin Halvorson (1970)
Clifford W. Hesseltine (1971)
William L. Hewitt (1969)
John J. Iandolo (1971)
Marvin J. Johnson (1972)
Alfred G. Karlson (1972)
Lloyd L. Kenpe (1970)
George E. Kenny (1970)
William M. M. Kirby (1972)
W. A. Konetzka (1970)
Hubert Lechevalier (1970)
Joseph Lein (1972)
Mark H. Lepper (1969)
John Liston (1971)
Warren Litsky (1972)
Robert Mah (1971)
Joseph L. Melnick (1970)
William I. Metzger (1971)

C. F. Niven, Jr. (1970)
David Paretsky (1970)
D. Perlman (1971)
David Pramer (1971)
John B. Routien (1971)
Carl P. Schaffner (1969)
E. L. Schmidt (1971)
Warren S. Silver (1970)
Louis DS Smith (1972)
S. S. Socransky (1972)
Christian Stoll (1970)
Welton I. Taylor (1970)
M. J. Thirumalachar (1970)
Joseph P. Truant (1970)
Hamao Umezawa (1970)
Selman A. Waksman (1969)
George H. Warren (1972)
Eugene D. Weinberg (1972)
Max R. Zelle (1971)

Robert A. Day, *Managing Editor, 4715 Cordell Ave., Bethesda, Md. 20014*

EX OFFICIO

E. M. Foster, President (1969-1970)

Donald E. Shay, Secretary

R. E. Hungate, Vice-President (1969-1970)

H. B. Woodruff, Treasurer

Applied Microbiology, a publication of the American Society for Microbiology, 4715 Cordell Ave., Bethesda, Md. 20014, is devoted to the advancement and dissemination of applied knowledge concerning microorganisms. *Applied Microbiology* is published monthly, two volumes per year. The subscription price is \$26 (foreign, \$27) per year. Single copies are \$4.00 (foreign, \$4.25). Members of the American Society for Microbiology may receive *Applied Microbiology* as part of their dues. Correspondence relating to reprints, defective copies, availability of back issues, and lost or late proofs should be directed to the ASM Publications Office, 4715 Cordell Ave., Bethesda, Md. 20014. Correspondence from ASM members relating to membership

dues, member subscriptions, changes of address, incorrect address, incorrect journals, etc., should be directed to the American Society for Microbiology, 1913 I St., N.W., Washington, D.C. 20006. Nonmembers of the Society should write to The Williams & Wilkins Co., 428 E. Preston St., Baltimore, Md. 21202, regarding institution of nonmember subscriptions and nonreceipt of journals. Published monthly by the ASM at 428 E. Preston St., Baltimore, Md. 21202.

Second-class postage paid at Baltimore, Md. 21202, and at additional mailing offices. Made in the United States of America. Copyright © 1969, American Society for Microbiology. All Rights Reserved.

CONTENTS

No. 1, JULY 1969

Antimicrobial Agents and Chemotherapy

In Vitro Antiviral Activity of Mycophenolic Acid and Its Reversal by Guanine-Type Compounds. J. C. CLINE, JANET D. NELSON, K. GERZON, R. H. WILLIAMS, AND D. C. DELONG.....	14
In Vitro Susceptibility of <i>Neisseria gonorrhoeae</i> to Nine Antimicrobial Agents. JOHN E. MARTIN, JR., ARZELL LESTER, DOUGLAS S. KELLOGG, JR., AND JAMES D. THAYER.....	21
Modified Microbiological Assay for Rapid Estimation of Antibiotic Concentrations in Human Sera. S. ANN STROY.....	31
Mode of Action of Lomofungin. DAVID GOTTLIEB AND GREGORIO NICOLAS.....	35
In Vitro Studies of a New Semisynthetic Penicillin, 6-D- α -Sulfoaminophenylacetamido)-Penicillanic Acid. GERALD P. BODEY AND DOROTHY STEWART.....	76
Determination of Antibiotic Susceptibility of <i>Rickettsia</i> by the Plaque Assay Technique. JOSEPH E. MCDADE.....	133

Clinical Microbiology, Virology, and Immunology

Assay of the Antibiotic Activity of Serum. WALTER H. TRAUB.....	51
Quantitative Urine Culture by Surface Drop Method. JOHANNA C. LORRIER AND HANS A. VALKENBURG.....	57
Characterization of <i>Micrococcaceae</i> Isolated from Clinical Sources. DONALD A. PERSON, PAULINE K. W. YU, AND JOHN A. WASHINGTON, II.....	95
Fluorescent-Antibody Studies with Antisera Against Heated and Unheated Poliovirus Type 1. MILFORD H. HATCH.....	98
Method for Increasing Atmospheric Carbon Dioxide in Bacteriological Incubators. ALFRED G. KARLSON AND PATRICK E. CASKEY.....	124
Safe Procedure for Opening Evacuated Glass Ampoules Containing Dried Pathogens. DONALD GREIFF.....	130

Food and Deterioration

Development of Radiation Resistance in <i>Salmonella</i> Cultures. J. J. LICCIARDELLO, J. T. R. NICKERSON, S. A. GOLDBLITH, C. A. SHANNON, AND W. W. BISHOP.....	24
Resistance of Spores of <i>Clostridium botulinum</i> 33A to Combinations of Ultraviolet and Gamma Rays. E. DURBAN AND N. GRECZ.....	44
Growth of <i>Staphylococcus aureus</i> MF 31 on the Top and Cut Surfaces of Southern Custard Pies. D. L. PREONAS, A. I. NELSON, Z. JOHN ORDAL, M. P. STEINBERG, AND L. S. WEI.....	68
Effect of pH on the Preservation of Palm Wine by Sulfite. S. I. FAPARUSI.....	122
Methyl Anthranilate, an Inhibitor for the Germination of Spores of Aerobic Bacilli. CHANDAN PRASAD AND V. R. SRINIVASAN.....	131

Ecology and Taxonomy

Microbiological Evaluation of Incinerator Operations. MIRDZA L. PETERSON AND FRED J. STUTZENBERGER.....	8
Enzymatic Reduction of Iron Oxide by Fungi. J. C. G. OTTOW AND A. VON KLOPOTEK.....	41
Identification of Human Strains of <i>Actinomyces viscosus</i> . MARY A. GERENCSEK AND JOHN M. SLACK.....	80
Predominant Catalase-negative Soil Bacteria. II. Occurrence and Characterization of <i>Actinomyces humiferus</i> , sp. n. WILLIAM E. GLEDHILL AND L. E. CASIDA, JR.....	114

- Relationships Among Coagulase, Enterotoxin, and Heat-stable Deoxyribonuclease Production by *Staphylococcus aureus*. R. VICTOR, F. LACHICA, KARL F. WEISS, AND R. H. DEIBEL..... 126

Metabolism and Products

- Prodigiosin-like Pigments from *Actinomadura (Nocardia) pelletieri* and *Actinomadura madurae*. NANCY N. GERBER..... 1
- Rapid Determination by Light Scattering of Growth Parameters of *Mycoplasma laidlawii* in Liquid Media. JOSEPH P. WOLF AND LEON MARCUS..... 4
- L-Asparaginase Production by *Erwinia aroideae*. R. E. PETERSON AND A. CIEGLER..... 64
- Coconut as a Medium for the Experimental Production of Aflatoxin. S. N. ARSECULERATNE, L. M. DE SILVA, S. WIJESUNDERA, AND C. H. S. R. BANDUNATHA... 88
- Lipase from *Pseudomonas fragi*. I. Purification of the Enzyme. J. Y. LU AND B. J. LISKA..... 104
- Lipase from *Pseudomonas fragi*. II. Properties of the Enzyme. J. Y. LU AND B. J. LISKA..... 108
- Tremorgenic Toxin from *Penicillium palitans*. ALEX CIEGLER..... 128

No. 2, AUGUST 1969

Antimicrobial Agents and Chemotherapy

- Antibacterial Activity of 2'-Esters of Erythromycin. P. L. TARDREW, J. C. H. MAO, AND D. KENNEY..... 159
- Effects of Systemic Demethylchlortetracycline on Human Cutaneous Microflora. R. R. MARPLES AND P. WILLIAMSON..... 228
- 5-Azacytidine: Microbiological Assay in Mouse Blood. ROBERT F. PITTILLO AND CAROLYN WOOLLEY..... 284

Clinical Microbiology, Virology, and Immunology

- Influence of Statolon on Resistance of Mice to Influenza. FRANK F. PINDAK, JEROME P. SCHMIDT, AND JERRY Z. KENDRICK..... 147
- Four-hour Urease Test for Distinguishing Between *Klebsiella* and *Enterobacter*. A. L. BARRY, K. L. BERNSOHN, AND L. D. THRUPP..... 156
- Protection Antisera Afford Against Death by Endotoxin. HOWARD S. RUBENSTEIN AND JANE WORCESTER..... 177
- Time, Cost, and Efficacy Study of Identifying Group A Streptococci with Commercially Available Reagents. LAWRENCE A. CHITWOOD, MYRA B. JENNINGS, AND HARRIS D. RILEY, JR..... 193
- Micro Test for Streptococcal Antideoxyribonuclease B. GEORGE C. KLEIN, CAROLYN N. BAKER, BETTY V. ADDISON, AND MAX D. MOODY..... 204
- Efficiency of a Multitest System (Enterotube) for Rapid Identification of *Enterobacteriaceae*. E. GRUNBERG, E. TITSWORTH, G. BESKID, R. CLEELAND, JR., AND W. F. DELORENZO..... 207
- Quantitation of Microorganisms in Sputum. P. W. MONROE, H. G. MUCHMORE, F. G. FELTON, AND J. K. PIRTLE..... 214
- Analysis of the Diluents Used for Rubella Virus Hemagglutination and Hemagglutination-Inhibition Tests. H. J. DOLD AND R. L. NORTHROP..... 221
- Comparative Sensitivity of Tissue Cultures to Rubella Virus: Use of Guinea Pig Cells for Virus Titration. L. HORTA-BARBOSA AND JOEL WARREN..... 251
- Effect of Cultural Environment on the Blood Group Activity of Microorganisms. MARCIA R. MOODY, VIOLA M. YOUNG, AND JOHN E. FABER..... 262
- Preparation of Primary Bovine Corneal Epithelial Cell Cultures for Use in Virological Investigations. G. E. WILCOX..... 268
- Area-sampling Technique for Quantitative Pharyngeal Cultures. WALDEMAR G. JOHANSON, ALAN K. PIERCE, AND JAY P. SANFORD..... 276
- Nonviable Venezuelan Equine Encephalomyelitis Hemagglutinin Prepared from Tissue Cultures by Gamma Radiation. MORTON REITMAN..... 278
- Simple Technique for Dark-Field Photography of Immunodiffusion Bands. RONALD P. JENSH AND ROBERT L. BRENT..... 280

Detection of Lymphocytic Choriomeningitis Virus Antibody in Murine Sera by Immunofluorescence. VESTER LEWIS AND DIANE CLAYTON.....	289
Method for Eliminating Anticomplementary Activity in Animal Sera. MATTHEW A. BUCCA AND ANN O. ALDER.....	291

Food and Deterioration

Control of <i>Byssoschlamys</i> and Related Heat-resistant Fungi in Grape Products. A. DOUGLAS KING, JR., H. DAVID MICHENER, AND KEITH A. ITO.....	166
Detection of Nuclease Activity in Semisolid and Broth Cultures. R. VICTOR F. LACHICA AND R. H. DEIBEL.....	174
Microbiological Evaluation of Pacific Shrimp Processing. JANICE M. HARRISON AND J. S. LEE.....	188
Response of White Mice to Cells and Culture Constituents of <i>Clostridium perfringens</i> . L. D. SATTERLEE AND H. W. WALKER.....	240
Persistence of <i>Salmonella typhimurium</i> on Fabrics. LEE J. WILKOFF, LOUISE WESTBROOK, AND GLEN J. DIXON.....	256

Ecology and Taxonomy

Medical Applications of Dust-free Rooms. III. Use in an Animal Care Laboratory. GERARD J. MCGARRITY, LEWIS L. CORIELL, RUSSELL W. SCHAEGLER, ROBERT J. MANDLE, AND ARTHUR E. GREENE.....	142
Biological Evaluation of Carpeting. ROGER L. ANDERSON.....	180
<i>Klebsiella</i> , <i>Enterobacter</i> , and <i>Serratia</i> : Biochemical Differentiation and Susceptibility to Ampicillin and Three Cephalosporin Derivatives. RONALD J. ZABRANSKY, JACK W. HALL, FRED E. DAY, AND GERALD M. NEEDHAM.....	198
Rapid Technique for Enumeration and Isolation of Peroxidase-producing Microorganisms. LUCIEN M. BORDELEAU AND RICHARD BARTHA.....	274
New <i>Salmonella</i> Serotype: <i>Salmonella enteritidis</i> ser. Ordenez. SYLVIA F. BARTES, W. J. MARTIN, P. E. O'CONNOR, L. MARSDEN, AND H. VOGEL.....	282
Negative-Pressure Isolator for Work with Hazardous Infectious Agents in Monkeys. NICOLA M. TAURASO, GEORGE F. NORRIS, THOMAS J. SORG, REGINALD O. COOK, MURREL L. MYERS, AND ROY TRIMMER.....	294

Metabolism and Products

Influence of Temperature on Glucose Utilization by <i>Pseudomonas fluorescens</i> . SAMUEL A. PALUMBO AND LLOYD D. WITTER.....	137
Nutritional Value of Lipids in <i>Hydrogenomonas eutropha</i> as Measured in the Rat. CAROL I. WASLIEN AND DORIS HOWES CALLOWAY.....	152
Growth of <i>Bacteroidaceae</i> in Stirred Fermentors. ANN WAHREN AND TORD HOLME.....	235
Effects of Nitrogen Limitation on the Growth and Composition of Unicellular Algae in Continuous Culture. B. RICHARDSON, D. M. ORCUTT, H. A. SCHWERTNER, CARA L. MARTINEZ, AND HAZEL E. WICKLINE.....	245
Agar Plate Method for Detecting Microorganisms Which Produce Equilin and Other Estrogens from Various Steroids. CLAUDE VÉZINA, KARTAR SINGH, AND S. N. SEHGAL.....	270
Substrate Specificity of <i>Actinoplanes</i> Antibiotic Peptide Lactonases. D. PERLMAN AND C. T. HOU.....	272
Reversal by Citrate of the Iodoacetate and Fluoride Inhibition of Glutamic Acid Production by <i>Corynebacterium glutamicum</i> . JEROME BIRNBAUM AND ARNOLD L. DEMAINE.....	287

No. 3, SEPTEMBER 1969

Antimicrobial Agents and Chemotherapy

In Vitro Susceptibility of <i>Pseudomonas aeruginosa</i> to Carbenicillin and the Combination of Carbenicillin and Gentamicin. JOHN P. PHAIR, CHATRCHAI WATANAKUNAKORN, AND THOMAS BANNISTER.....	303
---	-----

Effects of Topical Anesthetics on <i>Pullularia pullulans</i> and <i>Debaryomyces hanseni</i> . EMANUEL MERDINGER, WALTER S. GUTHMANN, AND FRANCIS W. MANGINE.....	365
In Vitro Action of Carbenicillin Against Bacteria Isolated from Clinical Material. HENRY D. ISENBERG AND MARIE SIEGEL.....	387
Comparative Study of Responses to Neomycins B and C by Microbiological and Gas-Liquid Chromatographic Assay Methods. KIYOSHI TSUJI, JOHN H. ROBERTSON, RUTH BAAS, AND D. J. MCINNIS.....	396
New Approach for the Evaluation of Antimycobacterial Drug Combinations In Vitro (the Laboratory Model Man). K. D. STOTTMEIER, C. L. WOODLEY, AND G. P. KUBICA.....	399
In Vitro Activity of Coumermycin A ₁ Against <i>Mycobacterium tuberculosis</i> var. <i>hominis</i> . RICHARD J. DUMA AND JOHN F. WARNER.....	404
Rat Pyelonephritis Model Suitable for Primary or Secondary Screening. S. E. BURROUS AND J. B. CAWEIN.....	448
In Vitro Effects of Carbenicillin Combined with Gentamicin or Polymyxin B Against <i>Pseudomonas aeruginosa</i> . THEODORE C. EICKHOFF.....	469
Chemotherapeutic Activity of Bluensomycin. BRENDA J. RAY AND ROBERT F. PITILLO.....	509
Pseudourea, 2,2'-(9,10-Anthrylenedimethylene) bis-(2-thio-, Dihydrochloride) Dihy- drate: Microbiological Assay and Tissue Distribution Studies in Mice. ROBERT F. PITILLO AND CAROLYN WOOLLEY.....	519

Clinical Microbiology, Virology, and Immunology

Immunological Studies with an M-Deficient Histoplasmin Skin-Test Antigen. LEO KAUFMAN, DAVID McLAUGHLIN, AND ROBERT T. TERRY.....	307
Reactivity of Two Selected Antigens of <i>Neisseria gonorrhoeae</i> . GILBERT REISING, JOHN D. SCHMALE, DAN G. DANIELSSON, AND JAMES D. THAYER.....	337
Large-Plate Method for the Assay of Neomycin in Serum. A. A. VAN SOESTBERGEN... Evaluation of Media for Differentiating Nonfermenting Gram-negative Bacteria of Medical Significance. GERALD L. GILARDI.....	350
Isolation of Shigellae. VII. Comparison of Gram-Negative Broth with Rappaport's Enrichment Broth. WELTON I. TAYLOR AND DOROTHY SCHELHART.....	393
Loss of Rubella Antibody from Immune Globulin Treated with Kaolin. V. J. CABASSO, R. E. LOUIE, K. A. HOK, C. T. ROBINSON, P. C. DAVIS, AND R. C. MINER.....	410
<i>Actinomyces naeslundii</i> as Agent of Human Actinomycosis. R. MARIE COLEMAN, LUCILLE K. GEORG, AND ALLEN R. ROZZELL.....	420
Comparative Pathogenicity of <i>Actinomyces naeslundii</i> and <i>Actinomyces israelii</i> . R. MARIE COLEMAN AND LUCILLE K. GEORG.....	427
Preparation of La Crosse Virus Hemagglutinating Antigen in BHK-21 Suspension Cell Cultures. W. ADRIAN CHAPPELL, PEKKA E. HALONEN, ROBERTA F. TOOLE, CHARLES H. CALISHER, AND LEO CHESTER.....	433
Bacteriophage Typing of <i>Salmonella</i> . I. Isolation and Host Range Study of Bacterio- phages. ABEL AZIZ E. IBRAHIM.....	444
Comparative Study of the Efficacy of Seven Paper-Reagent Strips and Conventional Biochemical Tests in Identifying Gram-negative Organisms. JOHN M. MATSEN AND JOHN C. SHERRIS.....	452
Rapid Diagnosis of Bacteremia. SYDNEY M. FINEGOLD, MAURICE L. WHITE, IRWIN ZIMENT, AND WILLIAM R. WINN.....	458
Effectiveness of Therapy with a Multistranded Synthetic Polynucleotide Complex Against a Murine Sarcoma Virus. JOHN W. PEARSON, WILLIE TURNER, PAUL S. EBERT, AND M. A. CHIRIGOS.....	474
Effect of Endotoxin on Serum Zinc Concentrations in the Rat. ROBERT S. PEKAREK AND WILLIAM R. BEISEL.....	482
Automated, Quantitative Microhemagglutination Assay for <i>Treponema pallidum</i> Anti- bodies. PATRICIA M. COX, LESLIE C. LOGAN, AND LESLIE C. NORINS.....	485
Complement-Fixing Antigen from BHK-21 Cell Cultures Infected with Lymphocytic Choriomeningitis Virus. WILLIAM J. BROWN AND B. E. KIRK.....	496
Use of Mitomycin C to Distinguish <i>Brucella abortus</i> Field Strains from the Vaccinal <i>Brucella abortus</i> Strain 19. DONALD M. MYERS AND DORA DOBOSCH.....	511

- Use of Sealed Agar Plates for Bacterial Cultures Under Jungle Conditions. ROBERT C. MOELLER, JR., AND LAWRENCE J. KUNZ..... 526

Food and Deterioration

- Effect of pH and Chelating Agents on the Heat Resistance and Viability of *Salmonella typhimurium* Tm-1 and *Salmonella senftenberg* 775W in Egg White. J. A. GARIBALDI, K. IJCHI, AND H. B. BAYNE..... 318
- Fermentation Patterns of Poorly Fermenting Cabbage Hybrid. J. R. STAMER, M. H. DICKSON, J. B. BOURKE, AND B. O. STOYLA..... 323
- Increased Sensitivity of Immunofluorescent Assay for *Salmonella* in Nonfat Dry Milk. R. H. REAMER, R. E. HARGROVE, AND F. E. McDONOUGH..... 328
- Thermal Injury and Recovery of *Salmonella typhimurium* and Its Effect on Enumeration Procedures. CAROL W. CLARK AND Z. JOHN ORDAL..... 332
- Isolation of Human Enterovirus from Mussels. M. BENDINELLI AND A. RUSCHI..... 531

Ecology and Taxonomy

- Some Factors Affecting Fermentation Capacity and Net Growth of Rumen Microorganisms. MANAL ZAKI EL-DIN AND K. EL-SHAZLY..... 313
- Predominant Catalase-negative Soil Bacteria. III. *Agromyces*, gen. n., Microorganisms Intermediary to *Actinomyces* and *Nocardia*. WILLIAM E. GLEDHILL AND L. E. CASIDA, JR..... 340
- Differential Responses of Single Cells and Aggregates of *Mycoplasma* to Ultraviolet Irradiation. GEOFFREY FURNESS..... 360
- Microbiological Study of Water-Softener Resins. JOHN M. STAMM, WARREN E. ENGELHARD, AND JAMES E. PARSONS..... 376
- Modified Two-Phase System for Partition of *Bacillus macerans* Spores. L. E. SACKS..... 416
- Nitrate Ion-Selective Electrode in Microbial Media. STANLEY E. MANAHAN..... 479
- Scanning Electron and Phase-Contrast Microscopy of Bacterial Spores. L. A. BULLA, G. ST. JULIAN, R. A. RHODES, AND C. W. HESSELTINE..... 490
- Prolongation of Microbiological Air Sampling by a Monolayer on Agar Gel. K. R. MAY..... 513
- Comparison of Stainless-Steel Closures and Cotton Plugs in Maintaining Contamination-free Medium in Circulating Air. RICHARD P. SUTTER..... 525
- Electrically Heated Cuvette Chamber for Deoxyribonucleic Acid Melting Point Determinations. R. E. LEVIN..... 528

Metabolism and Products

- Resistance of *Pseudomonas* to Quaternary Ammonium Compounds. I. Growth in Benzalkonium Chloride Solution. FRANK W. ADAIR, SAM G. GEFTIC, AND JUSTUS GELZER..... 299
- Determination of Pyrrolnitrin and Derivatives by Gas-Liquid Chromatography. ROBERT L. HAMILL, HUGH R. SULLIVAN, AND MARVIN GORMAN..... 310
- Biochemical Decomposition of the Herbicide *N*-(3,4-Dichlorophenyl)-2-Methylpentanamide and Related Compounds. NAGIM EL-DIN SHARABI AND LUCIEN M. BORDELEAU..... 369
- Production of Luteoskyrin, a Hepatotoxic Pigment, by *Penicillium islandicum* Sopp. YOSHIO UENO AND ICHUJIRO ISHIKAWA..... 406
- Automatic Assessment of Respiration During Growth in Stirred Fermentors. DOUGLAS W. RIBBONS..... 438
- Production of Peptide Ergot Alkaloids in Submerged Culture by Three Isolates of *Claviceps purpurea*. A. M. AMICI, A. MINGHETTI, T. SCOTTI, C. SPALLA, AND L. TOGNOLI..... 464
- Enzymes Produced by a Strain of *Pseudomonas* Species Which Inactivate Inhibitors of Certain Viral Hemagglutinins. I. Identification and Purification of a Proteinase and Phospholipase C. NATHALIE J. SCHMIDT, PINKIE S. GEE, JUANITA DENNIS, AND EDWIN H. LENNETTE..... 500
- Production of *m*-Cresol by *Valsa friesii*. J. J. CHILD, L. R. NESBITT, AND R. H. HASKINS..... 515

Effects of Light, Temperature, and pH Value on Aflatoxin Production In Vitro. A. Z. JOFFE AND N. LISKER	517
Sugars and Amino Acids as Carbon, Nitrogen, or Energy Sources for <i>Coccidioides immitis</i> Spherules and Endospores. JOHN E. SIPPEL AND H. B. LEVINE	522

No. 4, OCTOBER 1969

Antimicrobial Agents and Chemotherapy

Antiviral Effect of Cyclic Amines on a 1969 Isolate of A ₂ Influenza. J. F. GREENE, JR., B. E. TILTON, AND J. J. QUILLIGAN, JR.	533
Site of Action of Nitrofurantoin in Experimental Urinary Tract Infection. HEONIR ROCHA, EDSON DA SILVA TELES, AND MILTON BARROS	547
Antiviral and Antitumor Antibiotics. XX. Effects of Rotenone, Deguelin, and Related Compounds on Animal and Plant Viruses. AKIRA TAKATSUKI, NOBUJI NAKATANI, MAKOTO MORIMOTO, GAKUZO TAMURA, MASANAO MATSUI, KEI ARIMA, ISAMU YAMAGUCHI, AND TOMOMASA MISATO	660
Quantitative Antibiotic Sensitivities of Ruminant Bacteria. CHIA-LI WANG, BEVERLY B. BALDWIN, ROBERT S. FULGHUM, AND PHLETUS P. WILLIAMS	677
Antibacterial Properties of 3,3',5,5'-Tetrachlorotranitrodiphenylamine. A. J. FRITSCH, C. E. MOORE, T. S. MEYER, I. L. SHKLAIR, AND L. F. DEVINE	684
Stability of Rifampin in Dimethylsulfoxide. ALFRED G. KARLSON AND JOHN A. ULRICH	692

Clinical Microbiology, Virology, and Immunology

Selection of Media for the Isolation of Common Bacterial L-Phase Organisms from a Clinical Specimen. LYNN N. NIMMO AND DONNA J. BLAZEVIC	535
Effect of Brilliant Green on the Motility of Salmonellae and Other Selected Microorganisms. A. R. SESSOMS AND G. J. BANWART	542
Identification of the <i>Mima-Herellea</i> Group of Organisms and Selected Members of the Genus <i>Neisseria</i> . ROBERT V. MARRARO AND MELVIN S. RHEINS	575
Role of Interferon in the Propagation of MM Virus in L Cells. DAVID J. GIRON	584
Antigenicity of Influenza Vaccine from Bovine Cell Cultures. EDUARDO LEIDERMAN AND WILLIAM J. MOGABGAB	596
Simple Method for Rapid Determination of Antibiotic Blood Levels. S. STANLEY SCHNEIERSON AND GERALD L. BOYLE	601
<i>Bordetella pertussis</i> Serotypes in the United States. GRACE ELDERING, JACK HOLWERDA, AUSMA DAVIS, AND JULIA BAKER	618
Prophylactic Effects of γ -Aminobutyrylhistidine (Homocarnosine) on Experimental Staphylococcal Infections in Mice. ANTONY J. MUKKADA, LEO G. NUTINI, AND ELTON S. COOK	641
Selective Culture Medium to Survey the Incidence of <i>Haemophilus</i> Species. JAMES J. CRAWFORD, LOUISE BARDEN, AND JAMES B. KIRKMAN, JR.	646
Isolation of Salmonellae and Shigellae from an Artificial Mixture of Fecal Bacteria. HENRY D. ISENBERG, S. KOMINOS, AND MARIE SIEGEL	656
Application of Paraffin Bait Technique to the Isolation of <i>Nocardia asteroides</i> from Clinical Specimens. S. K. MISHRA AND H. S. RANDHAWA	686
Rapid Plate Test for Evaluating Phage Induction Capacity. V. W. MAYER, M. G. GABRIDGE, AND E. J. OSWALD	697
Pitfalls in Identification of Methicillin-Resistant <i>Staphylococcus aureus</i> . J. ANDRÉ MARCOUX AND JOHN A. WASHINGTON, II	699

Food and Deterioration

Radiation Sterilization of Prototype Military Foods. III. Pork Loin. ABE ANELLIS, D. BERKOWITZ, C. JARBOE, AND H. M. EL-BISI	604
Immunofluorescent Staining of <i>Salmonella</i> Species with Flagellar Sera. J. M. GOEPFERT AND RUTHANN HICKS	612

Immunofluorescent Detection of Enterotoxin B in Food and a Culture Medium. RAYMOND L. STARK AND P. R. MIDDAGH.....	631
Effect of Repeated Irradiation on Various Characteristics of <i>Salmonella</i> . J. J. LICCIARDELLO, J. T. R. NICKERSON, S. A. GOLDBLITH, W. W. BISHOP, AND C. A. SHANNON.....	636
<i>Salmonella</i> Survey of Plant Foods Used in and Around the Home. FRANK C. MITTERMEYER AND V. D. FOLTZ.....	682

Ecology and Taxonomy

Reaction of Airborne <i>Rhizobium meliloti</i> to Some Environmental Factors. WILLIAM D. WON AND HAROLD ROSS.....	555
Combined Screw-Cap and Rubber-Stopper Closure for Hungate Tubes (Pre-reduced, Anaerobically Sterilized Roll Tubes and Liquid Media). H. R. ATTEBERY AND S. M. FINEGOLD.....	558
Occurrence of False-Positive Most Probable Number Tests for Fecal Streptococci in Marine Waters. JOHN D. BUCK.....	562
Characterization of Ornithine Decarboxylase-Positive, Nonmotile Strains of the <i>Klebsiella-Enterobacter</i> Group. JOHN M. MATSEN AND DONNA J. BLAZEVIC.....	566
Mouse Toxicity of Fungi of Tobacco. P. B. HAMILTON, G. B. LUCAS, AND R. E. WELTY.....	570
Evaluation of Culture Media for the Isolation of Salmonellae from Feces. R. M. SHARMA AND R. A. PACKER.....	589
Correlations Between Virulence and Other Characters of <i>Clostridium perfringens</i> Type A. A. FORGET, G. PAQUETTE, A. ROY, AND V. FREDETTE.....	668
Effect of Gravity on the Colonial Morphology of Staphylococci in Soft Agar. JUDD R. WILKINS, MARY B. HATTEN, AND SEYMOUR SALMIRS.....	680
Isolation of Phenylalanine-Negative <i>Proteus vulgaris</i> . WILLIAM W. SULTAN, JR.....	688
Scanning Electron Microscopy of Selected Members of the <i>Streptomyces hygroscopicus</i> Group. ALMA DIETZ AND JOHN MATHEWS.....	694

Metabolism and Products

Production of Tumor-Inhibitory L-Asparaginase by Submerged Growth of <i>Serratia</i> <i>marcescens</i> . BERNARD HEINEMANN AND ALMA J. HOWARD.....	550
Survey of Some <i>Actinomycetales</i> for α -Galactosidase Activity. A. J. LYONS, JR., T. G. PRIDHAM, AND C. W. HESSELTINE.....	579
Biosynthesis of Ochratoxin A. J. W. SEARCY, N. D. DAVIS, AND U. L. DIENER.....	622
Some Properties of the β -Lactamase Genes in <i>Staphylococcus epidermidis</i> . JACK N. BALDWIN, ROBERT H. STRICKLAND, AND MARILYN F. COX.....	628
Utilization of Electron Spin Resonance Spectroscopy for Observation of In Vivo Response to Fungicides. JOHN R. ROWLANDS AND EMILY M. GAUSE.....	650
Variants of <i>Serratia marcescens</i> Induced by Freeze-Drying. MANUEL SERVÍN-MASSIEU AND RAMÓN CRUZ-CAMARILLO.....	689

NO. 5, NOVEMBER 1969

Antimicrobial Agents and Chemotherapy

Effects of 1-(2-Nitro-1-Imidazolyl)-3-Methoxy-2-Propanol and 2-Methyl-5-Nitroimi- dazole-1-Ethanol Against Anaerobic and Aerobic Bacteria and Protozoa. HER- BERT N. PRINCE, E. GRUNBERG, E. TITSWORTH, AND W. F. DELORENZO.....	728
Effectiveness of Acetic Acid, Betadine, Amphyll, Polymyxin B, Colistin, and Genta- micin Against <i>Pseudomonas aeruginosa</i> . MARY HEDBERG AND JOHN K. MILLER..	854
In Vitro Activity of Coumermycin A ₁ . JOSEPH FEDORKO, SOL KATZ, AND HEDI ALL- NOCH.....	869

Clinical Microbiology, Virology, and Immunology

Interferon Production by Human Leukocytes in Vitro: Some Biological Characteris- tics. SPENCER H. S. LEE.....	731
--	-----

Yellow Fever Virus. II. Factors Affecting the Plaque Neutralization Test. SHELDON L. SPECTOR AND NICOLA M. TAURASO.....	736
Bacteriophage Typing of Salmonellae. II. New Bacteriophage Typing Scheme. ABDEL-AZIZ E. IBRAHIM.....	748
Epidemiological Fingerprinting of <i>Pseudomonas aeruginosa</i> by the Production of and Sensitivity to Pyocin and Bacteriophage. J. J. FARMER, III, AND LLOYD G. HERMAN.....	760
Effect of Mixed Cultures on Antibiotic Susceptibility Testing. AZRA SHAHIDI AND PAUL D. ELLNER.....	766
Effect of the Fluorescein to Protein Ratio on Anti- <i>Treponema pallidum</i> Conjugates. SUSAN M. MOTHERSHED.....	806
Production of Interferon in Serum-Free Human Leukocyte Suspensions. H. STRANDER	810
Standardized Viral Hemagglutination and Hemagglutination-Inhibition Tests. I. Standardization of Erythrocyte Suspensions. JOHN C. HIERHOLZER AND MORRIS T. SUGGS.....	816
Standardized Viral Hemagglutination and Hemagglutination-Inhibition Tests. II. Description and Statistical Evaluation. JOHN C. HIERHOLZER, MORRIS T. SUGGS, AND ELMER C. HALL.....	824
Congo Red-Agar Plating Medium for Detecting Pigmentation in <i>Pasteurella pestis</i> . MICHAEL J. SURGALLA AND EARL D. BEESLEY.....	834
Simplified Method for the Production of Carbohydrate Antigen from <i>Neisseria meningitidis</i> . EMILIO WEISS AND JAMES L. LONG.....	843
Automated Instrument for the Fluorescent Treponemal Antibody-Absorption Test and Other Immunofluorescence Tests. GERALD F. BINNINGS, MEL J. RILEY, MERRITT E. ROBERTS, RICHARD BARNES, AND THOMAS C. PRINGLE.....	861
Bacterial Immunoabsorbent Columns. R. O. THOMSON, P. D. WALKER, AND E. HARRIS.....	874
Accelerated Plaque Formation by Fowlpox Virus in the Presence of Chymotrypsin. BONNIE B. ASCH AND GEORGE E. GIFFORD.....	897
Activation of Coagulase Clotting by Trypsin Inhibitor. D. S. ORTH, A. W. ANDERSON, AND M. W. MONTGOMERY.....	906
Comparison of Methods for Tuberculosis Bacteriology. I. KRASNOW AND LAWRENCE G. WAYNE.....	915
Rapid Plaque Assay for Encephalomyocarditis Virus. DAVID A. BAKER AND LOWELL A. GLASGOW.....	932
Quantitation of Tail Lesions in Vaccinia-Infected Mice. N. N. JOSHI, M. JONES, AND J. D. MCCOLL.....	935
Incidence of Mucoid <i>Pseudomonas aeruginosa</i> from Clinical Sources. ROBERT G. DOGGETT.....	936
Inactivation of Reovirus Type 2 by a Combination of Chloroform and Moderate Temperature. RETO ENGLER AND CLARISA BROOME.....	940
Improved Growth Medium for Group A Streptococci. WILLIAM F. VINCENT AND KATHLEEN J. LISIEWSKI.....	954

Food and Deterioration

<i>Salmonella</i> in Wastes Produced at Commercial Poultry Farms. D. J. KRAFT, CAROLYN OLECHOWSKI-GERHARDT, J. BERKOWITZ, AND M. S. FINSTEIN.....	703
Accelerated Immunofluorescence Procedure for the Detection of <i>Salmonella</i> in Foods and Animal By-Products. LEONARD D. FANTASIA.....	708
Aflatoxin Production in Meats. I. Stored Meats. LOYD B. BULLERMAN, PAUL A. HARTMAN, AND JOHN C. AYRES.....	714
Aflatoxin Production in Meats. II. Aged Dry Salamis and Aged Country Cured Hams. LOYD B. BULLERMAN, PAUL A. HARTMAN, AND JOHN C. AYRES.....	718
Differential Agar Medium for Separating <i>Streptococcus lactis</i> and <i>Streptococcus cremoris</i> . M. SRINIVASULU REDDY, E. R. VEDAMUTHU, C. J. WASHAM, AND G. W. REINBOLD.....	755
Some Pink Yeasts Associated with Softening of Olives. REESE H. VAUGHN, TADEUSZ	

JAKUBCZYK, JAMES D. MACMILLAN, THOMAS E. HIGGINS, BHALCHANDRA A. DAVÉ, AND VERONICA M. CRAMPTON.....	771
Growth, Sporulation, and Germination of <i>Clostridium perfringens</i> in Media of Controlled Water Activity. CHUNGHEE K. KANG, MARGY WOODBURN, ANDREA PAGENKOPF, AND ROBERTA CHENEY.....	798
Rapid Determination of <i>Salmonella</i> in Samples of Egg Noodles, Cake Mixes, and Candies. GEORGE J. BANWART AND MADELEINE J. KREITZER.....	838
Aerobic and Facultative Microflora of Fresh and Spoiled Refrigerated Dough Products. C. W. HESSELTINE, R. R. GRAVES, RUTH ROGERS, AND H. R. BURMEISTER..	848
Isolation of a Bacterial Inhibitor from Green Olives. H. P. FLEMING, W. M. WALTER, JR., AND J. L. ETCHHELLS.....	856
Comparison of the Fatty Acids of Proteolytic Type B and Nonproteolytic Types E and F of <i>Clostridium botulinum</i> . C. E. KIMBLE, M. L. MCCOLLOUGH, V. A. PATERNO, AND A. W. ANDERSON.....	883
Two-Phase Slug Flow Heat Exchanger for Microbial Thermal Inactivation Research. W. H. STROUP, R. W. DICKERSON, JR., AND R. B. READ, JR.....	889
Survival of <i>Salmonella montevideo</i> on Wheat Stored at Constant Relative Humidity. MARTIN H. CRUMRINE AND VERNON D. FOLTZ.....	911
Incidence of Infectious Drug Resistance Among Lactose-Fermenting Bacteria Isolated from Raw and Treated Sewage. ALTON B. STURTEVANT, JR., AND THOMAS W. FEARY.....	918
Incidence of <i>Escherichia coli</i> in Black Walnut Meats. MELVIN T. MEYER AND REESE H. VAUGHN.....	925
Country Cured Ham as a Possible Source of Aflatoxin. EDWARD STRZELECKI, H. S. LILLARD, AND J. C. AYRES.....	938
Evaluation of Thallium Acetate-Citrate Medium for Isolation of Enterococci. Anthony A. BULICH AND PAUL A. HARTMAN.....	944
Relationship of Aflatoxicosis to <i>Salmonella gallinarum</i> Infections of Chickens. J. W. SMITH, W. R. PRINCE, AND P. B. HAMILTON.....	946
Incidence of <i>Clostridium botulinum</i> Type E in Alaskan Salmon. GARY A. HOUGHTBY AND CHARLES A. KAYSNER.....	950
Diluent Composition and the Recovery of <i>Escherichia coli</i> . WILLIAM A. WEILER AND S. E. HARTSELL.....	956
Sporulation of <i>Clostridium thermosaccharolyticum</i> . EDWARD J. HSU AND Z. JOHN ORDAL.....	958

Ecology and Taxonomy

Oxygen Sensitivity of Various Anaerobic Bacteria. WALTER J. LOESCHE.....	723
Control Mechanisms Operative in a Natural Microbial Population Selected for Its Ability to Degrade L-Lysine. I. Effect of Glucose in Batch Systems. C. P. L. GRADY, JR., A. F. GAUDY, JR., AND ELIZABETH T. GAUDY.....	776
Control Mechanisms Operative in a Natural Microbial Population Selected for Its Ability to Degrade L-Lysine. II. Effects of Fructose and Ribose in Batch Systems. C. P. L. GRADY, JR., AND A. F. GAUDY, JR.....	785
Control Mechanisms Operative in a Natural Microbial Population Selected for Its Ability to Degrade L-Lysine. III. Effects of Carbohydrates in Continuous-Flow Systems Under Shock Load Conditions. C. P. L. GRADY, JR., AND A. F. GAUDY, JR.	790
Stability of St. Louis Encephalitis Virus in the Airborne State. FRANK RABEY, ROBERT J. JANSSEN, AND LEE M. KELLEY.....	880
Effect of Prehumidification on Sampling of Selected Airborne Viruses. J. C. WARREN, T. G. AKERS, AND E. J. DUBOVI.....	893
Thermal Death of <i>Bacillus subtilis</i> var. <i>niger</i> Spores on Selected Lander Capsule Surfaces. W. W. PAIK, E. J. SHERRY, AND J. A. STERN.....	901
Some Morphological Types of Bacteriophages in Bovine Rumen Contents. M. J. B. PAYNTER, D. L. EWERT, AND W. CHALUPA.....	942
Atypical Reactions of <i>Escherichia coli</i> on Eosin Methylene Blue Agar. JOSEPH T. PARISI AND FREDERIC J. MARSIK.....	948

Metabolism and Products

- Glycolytic and Related Enzymes in Clostridial Classification. J. P. KOTZÉ..... 744
 Production of Aflatoxins by *Aspergillus flavus* Cultured on Flue-Cured Tobacco.
 HAROLD E. PATTEE..... 952

No. 6, DECEMBER 1969

Antimicrobial Agents and Chemotherapy

- Transferable Drug Resistance Among *Enterobacteriaceae* Isolated from Cases of
 Neonatal Diarrhea in Calves and Piglets. DAVID P. ADEN, NORMAN D. REED,
 NORMAN R. UNDERDAHL, AND CHARLES A. MEBUS..... 961
 Antimicrobial Activity of Some *N*-Substituted Amides of Long-Chain Fatty Acids
 ARTHUR F. NOVAK, JAMES M. SOLAR, ROBERT R. MOD, FRANK C. MAGNE, AND
 EVALD L. SKAU..... 1050
 Therapy of Staphylococcal Infections in Monkeys. IV. Further Comparison of Tri-
 acetyloleandomycin and Erythromycins. SAMUEL SASLAW, HAROLD N. CARLISLE,
 AND MAURICE MARIETTI..... 1077

Clinical Microbiology, Virology, and Immunology

- Improved Medium for Detecting Deoxyribonuclease-Producing Bacteria. P. B.
 SMITH, G. A. HANCOCK, AND D. L. RHODEN..... 991
 Practical Physiological Schema for the Identification of *Herellea vaginicola* and Its
 Differentiation from Similar Organisms. SALLEY B. SAMUELS, BERTIE PITTMAN,
 AND WILLIAM B. CHERRY..... 1015
 Biochemical Changes in Serum of Pure and Mixed *Streptococcus faecalis* and *Bacillus*
subtilis Infections in Rats. B. M. MITRUKA AND A. M. JONAS..... 1072
 Sulfadiazine Susceptibility Patterns of *Neisseria meningitidis* Group Y. CARL J.
 OUGHTON, JOHN A. ROBINSON, AND WILLIAM E. MEEKINS..... 1091
 Piggy-Back Microtransfer Technique. LOUIS W. CATALANO, JR., DAVID A. FUCCILLO,
 AND JOHN L. SEVER..... 1094
 Separation of Cell Types of *Vibrio fetus*. DAVID H. MARSH, ELMER S. KLUSES, AND
 JAMES E. OGG..... 1096
 Use of Fast Green in Agar-Diffusion Microbiological Assays. D. E. HUNT AND
 R. C. CALDWELL..... 1098
 Primary Isolation Medium for *Cryptococcus neoformans*. R. A. VOGEL..... 1100

Food and Deterioration

- Production of Staphylococcal Enterotoxins A, B, and C in Various Media. R. F.
 REISER AND K. F. WEISS..... 1041
 Applicability of Aeration and Delayed Addition of Selenite to the Isolation of Sal-
 monellae. JOHN A. ALFORD AND NANCY L. KNIGHT..... 1060
 New Technique for Rapid Purification, Entrapment, and Recovery of Enterotoxin A
 from a Liquid Chamber by Polyacrylamide Gel Electrophoresis. P. L. TAN,
 C. B. DENNY, W. R. HEILMAN, AND C. W. BOHRER..... 1089

Ecology and Taxonomy

- Algal Flocculation with Synthetic Organic Polyelectrolytes. MARK W. TENNEY,
 WAYNE F. ECHELBERGER, JR., RONALD G. SCHUESSLER AND JOSEPH L. PAVONI... 965
Salmonella Types Isolated from the Gulf of Aarhus Compared with Types from In-
 fected Human Beings, Animals, and Feed Products in Denmark. K. GRUNNET
 AND B. BREST NIELSEN..... 985
 Survival of Human Pathogens in Composted Sewage. B. BEAUFORD WILEY AND
 STEPHEN C. WESTERBERG..... 994
 Microbiological Evaluation of the Vacuum Probe Surface Sampler. NORMAN J.
 PETERSEN AND WALTER W. BOND..... 1002
 Concentration of Viruses from Sewage and Excreta on Insoluble Polyelectrolytes.
 CRAIG WALLIS, SAUL GRINSTEIN, JOSEPH L. MELNICK, AND JOSEPH E. FIELDS..... 1007

Numerical Taxonomy of Heterotrophic Bacteria Growing in Association with Continuous-Culture <i>Chorella sorokiniana</i> . CAROL D. LITCHFIELD, RITA R. COLWELL, AND J. M. PRESCOTT.	1044
Elimination of Toxicity from Polyvinyl Trays After Sterilization with Ethylene Oxide. A. RUETER AND J. B. SCHLEICHER.	1057
Observation of Microorganisms in Soil and Other Natural Habitats. L. E. CASIDA, JR.	1065
Pour Plates or Streak Plates? A. A. VAN SOESTBERGEN AND CHING HO LEE.	1092

Metabolism and Products

Metabolism of ^{14}C -Chlorobenzilate and ^{14}C -Chloropropylate by <i>Rhodotorula gracilis</i> . SATORU MIYAZAKI, G. MALLORY BOUSH, AND FUMIO MATSUMURA.	972
Production of Nucleic Acid-Related Substances by Fermentative Processes. XXVIII. Accumulation of 5' Inosinic Acid by a Manganese-Insensitive Mutant of <i>Brevibacterium ammoniagenes</i> . AKIRA FURUYA, SHIGEO ABE, AND SHUKUO KINO-SHITA.	977
Conditions for the Production of L-Asparaginase 2 by Coliform Bacteria. M. H. BILIMORIA.	1025
Microbial Production of Xylitol from Glucose. HIROSHI ONISHI AND TOSHIYUKI SUZUKI.	1031
Production and Properties of Galactosidases from <i>Corticium rolsii</i> . AKIRA KAJI AND TAE ICHIMI.	1036
Microbial Transformation of Terpenoids. I. Identification of Metabolites Produced by a Pseudomonad from Citronellal and Citral. S. S. JOGLEKAR AND R. S. DHAVLIKAR.	1084
Improvement of the Microbiological Assay for Calcium Leucovorin. A. E. TANGUAY.	1088

INDEX TO DATE OF ISSUE

Month	Date of Issue	Pages
July	7/25/69	1-136
August	8/29/69	137-298
September	9/30/69	299-532
October	10/29/69	533-702
November	11/25/69	703-960
December	12/22/69	961-1100

